FROZEN DESSERT MACHINES

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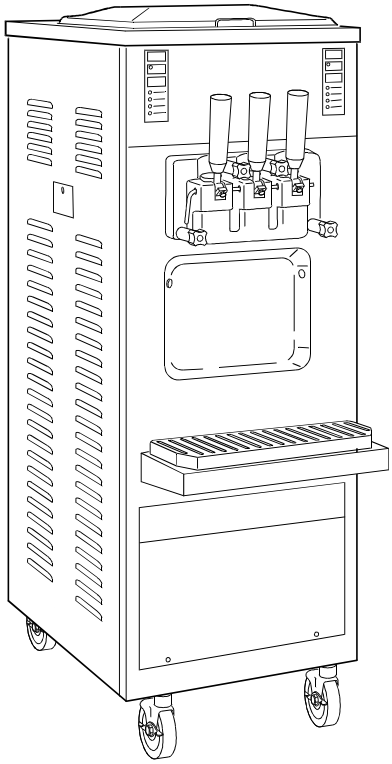

UF – 313 E Gravity and Pump

Soft Serve Freezer
Double Flavor Floor Model

OPERATION MANUAL

Foreword

Thank you for selecting Coldelite to meet your operation and growing demands. Your Coldelite freezer has been manufactured utilizing the most advanced technology and modern equipment available in the industry. We at Coldelite, take great pride and care in the manufacturing of each and every freezer, using only the finest components available, to provide you with many years of trouble free operation.

Many years of experience in the manufacturing of soft serve dispensing equipment have guided us in the preparation of this Operation Manual. *PLEASE READ IT CAREFULLY* and keep it in an available place for future reference and most of all, follow the instructions carefully.

On the following pages, you will find important information and procedures, which describe the proper installation, sanitizing, operation, and maintenance of your Coldelite freezer. We feel certain that your compliance with these instructions will assure excellent performance, trouble-free operation and profitable business for years to come.

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!! IMPORTANT !!

Failure to closely follow operational and maintenance procedures may result in damage to the unit and / or void your warranty. Coldelite Corporation will not be responsible for any machine not properly operated or maintained.

Part I – Installation

Before starting this procedure, ensure that the shipping carton does not show any evidence of damage due to dropping or mishandling. This may indicate that the freezer was damaged during transit or delivery.

!! IMPORTANT !!

Should the outside of the shipping carton give any indication of possible damage, state this on the bill of lading prior to signing. Contact the freight carrier and request an inspection of damage. If this procedure is not adhered to, you will forfeit your rights to file a damage claim and be responsible for subsequent repair costs.

A)Uncrating the Freezer

1) The outer shipping carton is secured to the shipping pallet with strapping. When cutting this strapping, do so with caution as it may spring out quickly. After cutting the strapping, lift the shipping carton straight up and off of the freezer.

2) Remove the protective foam boards and plastic wrapping from the outside of the freezer.

3) The freezer is also secured to the shipping pallet with strapping. Again, exercise caution when cutting this strapping since it may spring out quickly.

4) You must now remove the side panels from the freezer prior to lifting the freezer off of the pallet with a lift truck. To remove the side panels, first remove the side drip chutes and lower chute cover on both side panels. Next remove the screws in each side panel and gently pull down and away from the machine frame. Remove the protective plastic coating from the outer panel surfaces.

B) Positioning the Machine

After removing the machine from the shipping pallet, it is now ready to be located in its final location.

Prior to choosing a location keep in mind that the freezer should be accessible for periodic maintenance and have adequate space for necessary airflow.

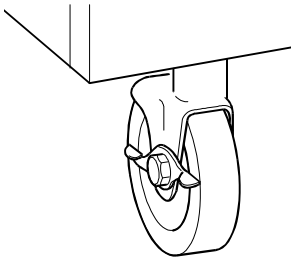


Figure 1

1) The freezer is equipped with pivoting casters to allow for ease of movement. When placed in its final location, lock the caster brakes to prevent unwanted movement of the freezer. (Refer to Figure 1)

2) The freezer must also be level to ensure proper drainage from the mix tanks and cylinders. To level, place a level on all corners and shim the casters as needed.

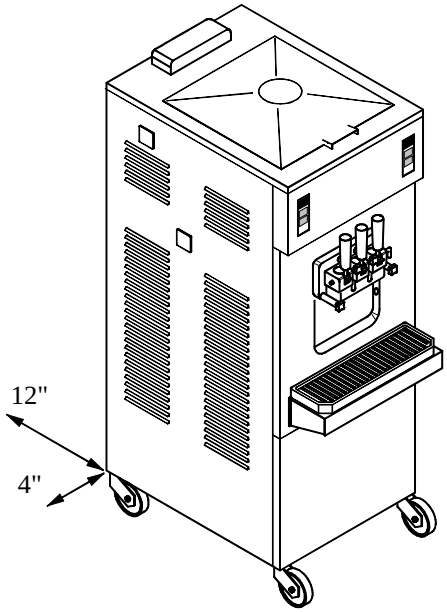


Figure 2

3) If your freezer is air cooled, you ***MUST*** have adequate spacing on both sides and rear of the machine. You should have a minimum of 4 inches of clearance on both sides and 12 inches of clearance on the rear of the machine. This will ensure an adequate airflow is maintained. (Ref. to Figure 2)

***Note**: If these clearances are not maintained, the production capacity will be reduced, cycling will be increased and the potential will exist that the machine will stop completely*

4) It is necessary to clean the air condenser each month to remove dust, paper, etc., which may obstruct airflow. Prior to cleaning the condenser from the inside, disconnect the machines power supply.

5) The machine should be connected to a fused disconnect no more than six feet away. Electrical installation ***MUST*** comply with state and / local electrical codes.

6) Never position the machine in direct sunlight or near a heat source. This will reduce its performance and possible damage the freezer.

7) Water connections (Water Cooled Only)are made at the rear of the machine. A minimum of ½ inch (ID) water supply and drain lines are recommended. Both the water inlet and outlet lines must remain unobstructed or the machine performance will be affected.

C) Electrical Requirements

All wiring installed to operate the freezer must be in accordance with the National Electric Code and / or local electrical codes and regulations.

!! IMPORTANT !!

This machine must be properly grounded. Failure to properly ground the freezer may result in dangerous and / or fatal electric shock.

The main machine power supply must meet requirements at all times of operation. Voltage fluctuations ***must not*** exceed plus or minus 5% of the rated nameplate voltage.

All Coldelite machines are equipped with step down transformers for the control circuit supply. These transformers have a “multi-tap” input which must be wired to match the inlet voltage (ie. 208 or 230 vac). Failure to wire to the correct supply voltage can result in machine malfunction.

Electrical Connection – (Refer to Fig. 3)

Having removed the side panels from the frame, the main power connection box is located on the bottom of the frame. The connection box is labeled “Connect Power Line Here”. Connect the power supply wires to the machines using the appropriate electrical hardware and strain relief devices.

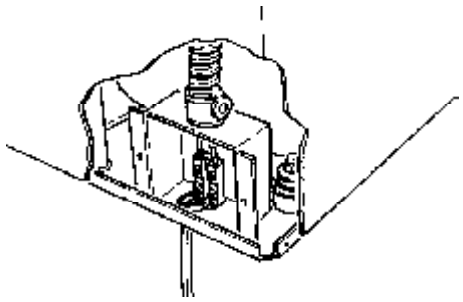


Figure 3

After the electrical connections are completed, turn the power supply on. At this time you must check the beater / auger motor rotation. The correct beater rotation (Facing the front of the machine) should be clockwise.

D) Completing the Installation

1) All of the setup and calibration of this freezer should be performed by an approved Coldelite Service Technician. Failure to calibrate this freezer properly can result in freezer damage and a voided warranty.

2) After installation and calibration of both electrical and refrigeration circuits, the side panels should be reinstalled.

!! IMPORTANT !!

Failure to closely follow factory setup and maintenance procedures will result in a voided warranty. Coldelite Corporation will not be responsible for any freezer which is not setup or maintained in accordance with factory procedures.

NOTE: Always turn the machine OFF and disconnect the power supply switch to the freezer prior to exposing any electrical connections or moving parts.

On the following pages you will find important information and procedures which describe the proper sanitizing, operation, and maintenance of your Coldelite Freezer. We are certain that your full compliance with instructions and procedures will result in many years of trouble free operation.

In the event this unit should malfunction or need maintenance, please contact your local Coldelite Distributor or Authorized Service Agent.

Part II – Explanation of Controls

A) Electronic Touch Pad – (Refer to figure 4)

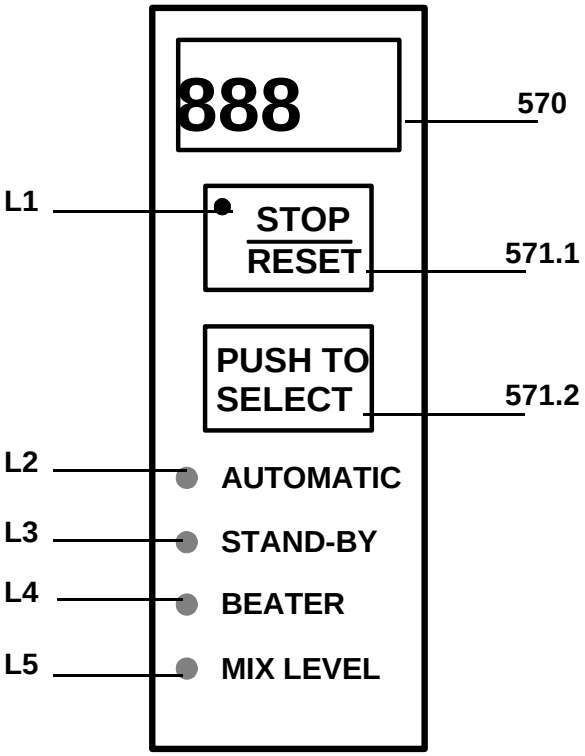


Figure 4

This machine is equipped with two independent electronic touch control pads. Each electronic touch pad operates one side of the freezer.

Indicator Lights – L1 through L4
These indicators illuminate to show the selected machine function. When illuminated, the machine is in that respective mode.

Indicator Light – L5
This light will illuminate when the mix tank is low or out of mix. It is also possible to activate a low mix level beeper in the programming mode.

Monitor – Position 570
This numerical monitor will display the cylinder product consistency while the machine is freezing product in the automatic mode. When not freezing the product in the cylinder, it will display mix tank temperature in *ALL* modes.

Stop / Reset – Position 571.1
When in this mode, the indicator light L1 will be lit and the machine functions off. From this mode you can access the programming mode or switch to operating modes.

Push to Select – Position 571.2
By pressing this button you can select any of the following machine modes:
- Automatic
- Stand-by
- Beater

The indicator light will illuminate corresponding to the mode selected with the touch pad.

Automatic Mode
When placed in this mode the indicator light L2 will illuminate and the machine will start the freezing process in the cylinder. During this freezing process, a number indicating the cylinder consistency will be displayed (monitor #570, the lower the number, softer the product). The machine will continue to freeze the product in the cylinder (numbers will increase) until the preset HOT number value is achieved. After achieving the preset cylinder consistency number (HOT) the machine will then start cooling the mix tank and display mix tank temperature.

Stand-By Mode
When placed in this mode the indicator light L3 will illuminate. This mode is used during prolonged idle periods. The mix temperature in both cylinder and mix storage tank is maintained below 40 degrees F by the electronic temperature probes. Product should not be served while in this mode as it will be too soft. The Monitor (#570) will only display the temperature in the mix tank while in this mode.
NOTE: If the mix level in the tank is below ½ full, a warmer than actual temperature will be displayed on the Monitor #570. The actual mix temperature will remain at a safe temperature below 40 degrees F.

Beater Mode
When placed in this mode the indicator light L4 will illuminate. This mode is used during the start-up (pump fed), cleaning and sanitizing of the machine. While in this mode the *ONLY* the beater / auger drive motor will operate. This mode has a built in safety device which will automatically switch the machine to the stop mode after 15 minutes of operation. This safety prevents an operator from inadvertently leaving the freezer in this mode for extended periods of time, which could damage the freezer.

Mix Tank Low Level Indicator
When low on mix in the mix storage tank, the indicator light L5 will illuminate. This will indicate that more mix is needed to operate the freezer. Each mix tank has a maximum capacity of 18 quarts each. ***DO NOT*** attempt to operate the freezer while low on mix or your freezer may be damaged. It is also possible to activate a beeper to sound when mix is low in the Automatic and Stand-By modes. This is done through the programming mode.

B) Dispensing Handles – (Refer to Figure 5)
The dispensing handles control the flow and extraction rate of finished product. The left handle serves product from the left cylinder, the right handle serves product from the right cylinder and the center dispenses equally from both cylinders. You should *ONLY* dispense product when the machine is in the automatic mode.

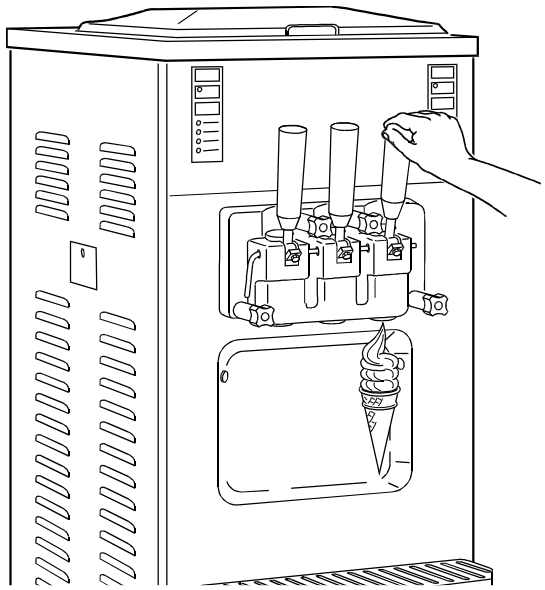


Figure 5

C) Photo Sensor Switches -(Refer to Figure 6)
In the Automatic mode the Photo Sensor Switches (Position #920) activate the beater / auger motors to dispense product. To activate the photo sensor switches, simply place your hand with a cone or cup under the dispensing head, pull the dispensing handle and dispense product.
NOTE: You must activate the photo sensor switch, starting the beater drive motor prior to dispensing product.

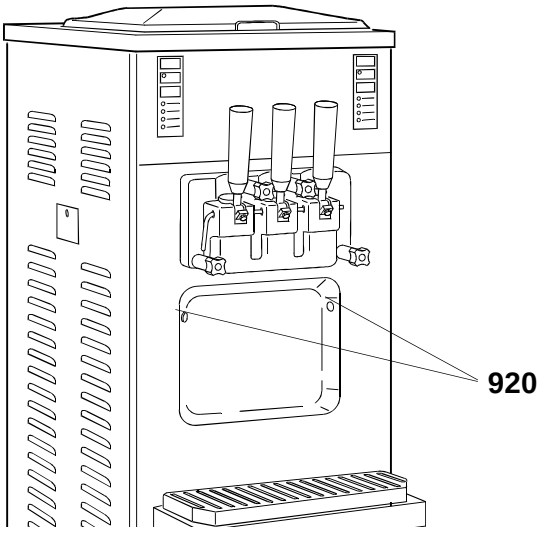


Figure 6

D) Dispensing Head Safety Switch
This machine is equipped with a dispensing head safety switch. With the dispensing head removed, the machine will not operate and Alarm 9 (AL9) will appear on the front touch pad monitor. Please refer to machine alarms on page 28 for more details.

E) Electrical Control Panel – (Refer to figure 7)
The electrical control panel is located on the bottom of the front panel. This control panel contains all of the machines electrical control components. *ONLY* a Coldelite Authorized Technician should access this control panel.

!! IMPORTANT WARNING !!

Disconnect the freezer power supply before opening the Electrical Control Panel and / or servicing.

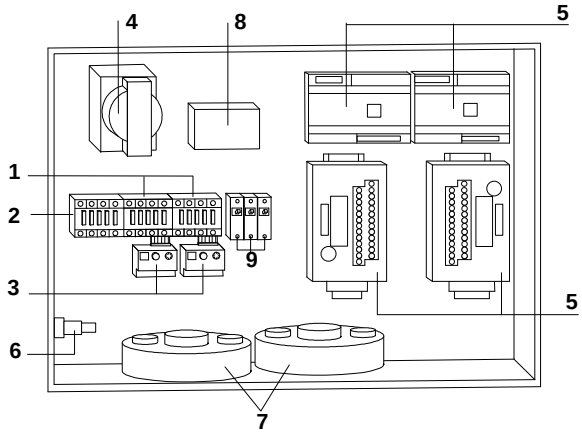


Figure 7

The following is an explanation of some of the components inside the electrical control panel.

1) Beater Motor Contactors - (Left /Right) – Activates the beater drive motor. In the "BEATER" mode, the contactor is energized by the front switch pad. In the "AUTO" mode, the contactor is energized by the photo sensor or 10 minute cycling timer.

2) Compressor Contactor – Activates the refrigeration compressor. When the unit is in the "AUTO" mode, the compressor contactor can be energized by the electronic HOT setting or the Tev Temperature probe. In the "Stand-By" mode, the contactor is energized by the Tev and Tec temperature probes.

3) Beater Motor Overload Protector - (Left/Right) – Monitors the current draw of the beater drive motor. If the motor draws excessive amperage, the overload will trip and Alarm 1 (RtA) will be displayed on the touch pad monitor.

4) Main Transformer – This transformer reduces the incoming line voltage to 24 volts for the primary control circuit.

5) Electronic Control Boards – (Left / Right) – These boards control and monitor *ALL* functions of the machine.

6) Safety Fuse – This fuse protects the high voltage side of the main transformer in the event of a short circuit. If tripped, all of the machines controls and touch pads will be inoperative.

7) Current Monitoring Transformer – (Left / Right) – These transformers monitor the current draw of the beater drive motors.

8) Secondary Transformer – This transformer reduces the voltage from 24 volts to 11 volts for the electronic control circuit.

9) Relays.

F) Other Controls

1) Refrigeration Solenoid Valves – These valves are located behind the front panel. These valves are used to control the flow of refrigerant to the cylinders or mix storage tanks. These valves are designated with EVC for each cylinder and EVV for the mix storage tank. (Refer to Figure 8)

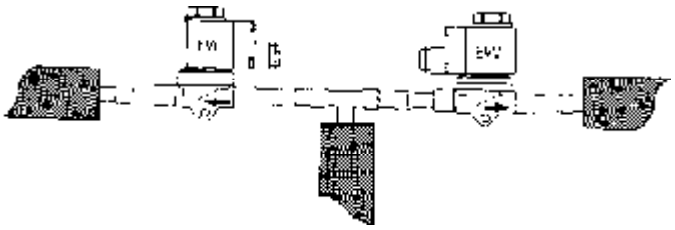


Figure 8

2) High Pressure Safety Switch – In the event of restricted airflow (Air Cooled) or restricted water flow (Water Cooled), this switch will turn off the compressor contactor.

While tripped, the beater motors will continue to run until the refrigerant pressure is reduced enough to reset the safety switch. After resetting, both the compressor and motor(s) will resume running.

Part III–Initial Cleaning Procedure

!! IMPORTANT !!

Before starting this procedure, place the machine in the STOP mode on the touch pad.

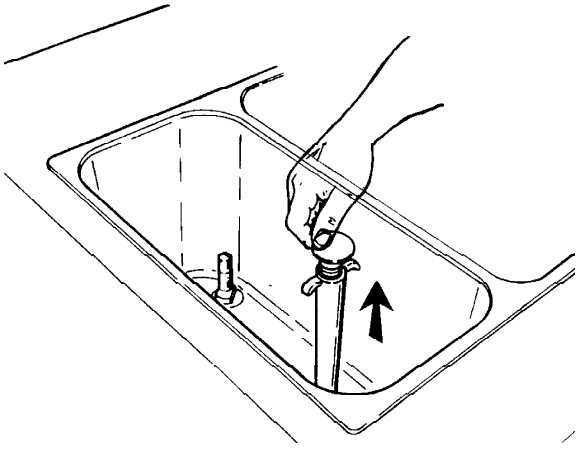
This is a new machine and although clean, it must be completely disassembled, washed and sanitized before adding fresh product. Please proceed as follows:

1) Remove the mix tank cover and spare parts items packed inside the mix tank. The spare parts kit will include: spatula, cleaning brushes, sanitary lubricant, oring removal tool, sanitizer packets, spare orings and seals, and operation manual. Place these items in a convenient place for future reference.

Helpful Suggestion: Before proceeding with the disassembly of the freezer, we recommend the use of a clean plastic pan or pail to place the removed parts into. This will minimize the possibility of misplacing or damaging these components.

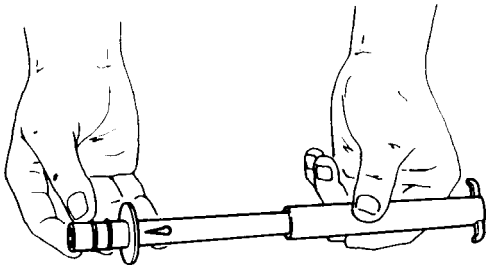
A) Gravity Fed Machines

Proceed with the disassembly process by removing the gravity feed tubes, which are located inside each mix storage tank. These should be pulled straight up and out of the tanks.

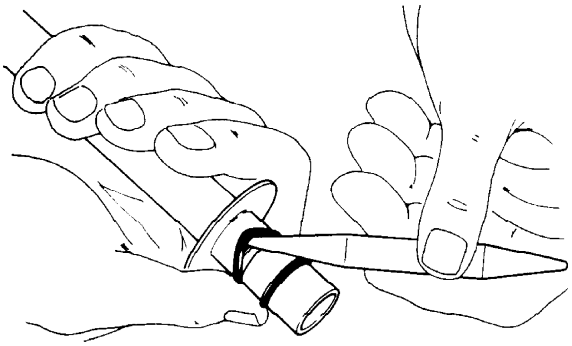


Once removed, the gravity feed tubes must be disassembled. To disassemble, first remove the splash guard from the center of the tube.

Next remove the outer regulating sleeve from the center tube by pulling straight off.



Finally remove the orings on the end of the center tube using *ONLY* the oring removal tool included in your spare parts kit.

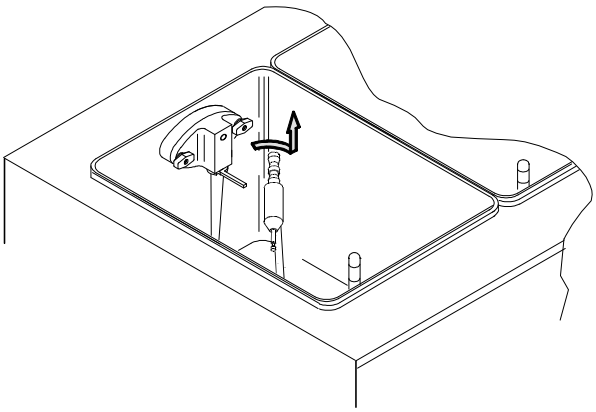


!! WARNING !!

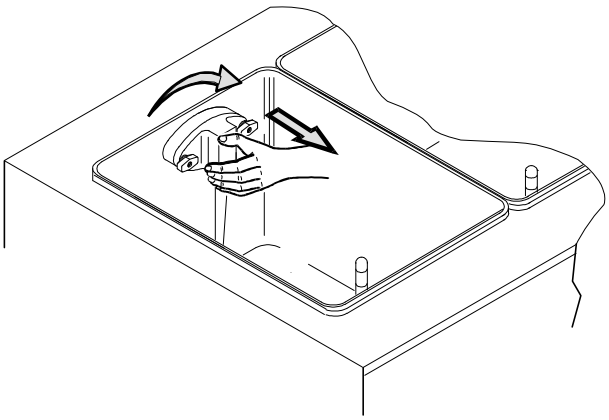
Never use anything other than the oring remover provided in your tool kit. Removing the orings with other objects or tools can possibly damage the orings and plastic parts.

B) Pump Fed Machines

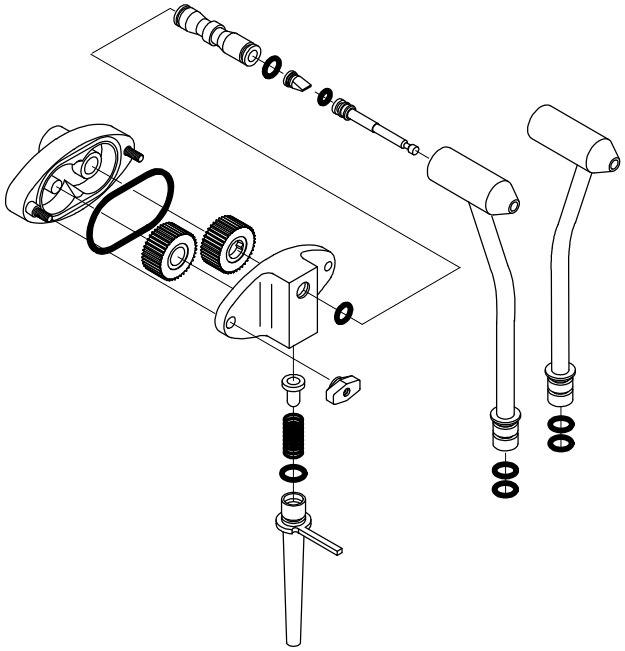
Proceed with the disassembly of the mix injection pumps located in each mix storage tank. First slide the connecting tube forward away from the mix pump faceplate. This should free the feeding elbow assembly from the pump assembly. Pull the feed elbow assemblies straight up and out of each mix storage tank.



Next remove each mix pump assembly by rotating clockwise until the hook stud on the rear of the pump disengages from the pump hub. After disengaging, slide the pump away from the rear of the machine and out of the mix storage tank.

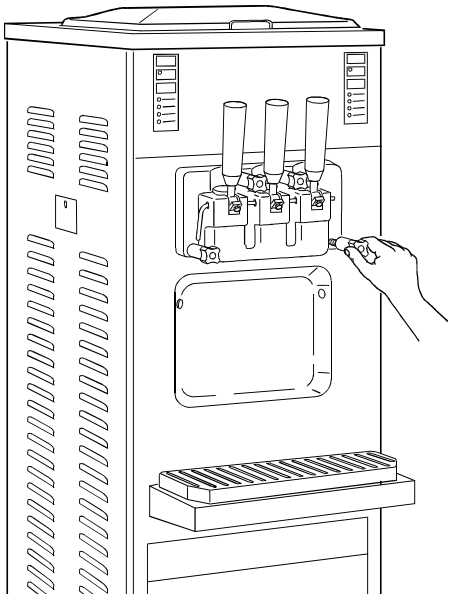


Disassemble the mix pump assemblies as pictured below (one per side). When disassembling the orings from the other components, use only the oring removal tool provided in the spare parts tool kit. Using other tools to remove the orings from their grooves can result in damaging both the oring and component.

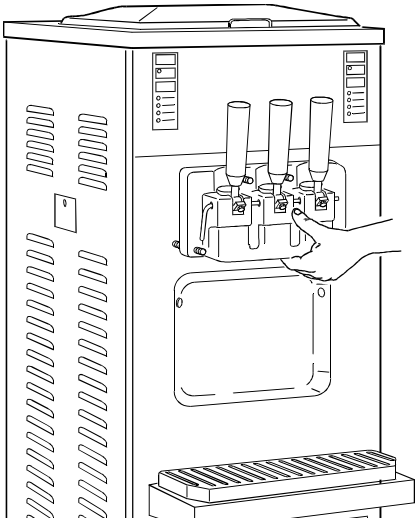


C) Disassembling the Dispensing Head

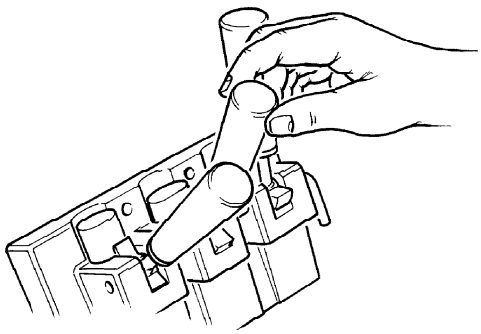
Loosen and remove the four dispensing head-retaining knobs. The knobs are removed by turning counter clockwise until loose.



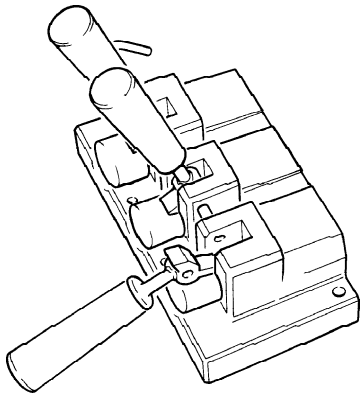
Remove the dispensing head by pulling straight out and away from the machine.



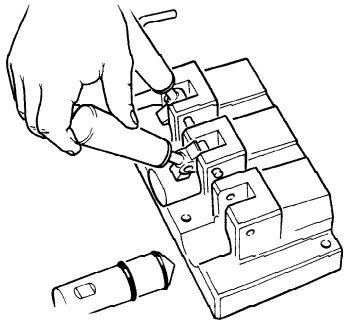
Disassemble the dispensing head by first opening all of the dispensing handles.



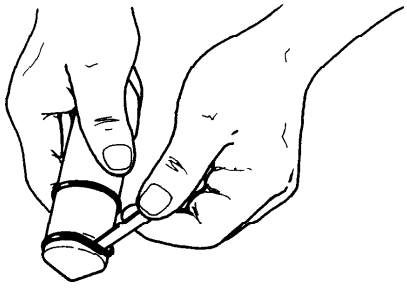
Pull the handle-retaining rod out far enough to allow the handle to disengage.



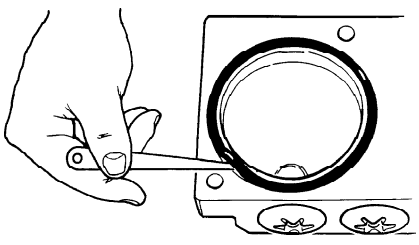
Return the retaining rod to its original position. Using the metal rod as a base, lever the piston from the dispensing head with the handle. Repeat this for the remaining pistons.



Using the oring removal tool, remove the orings from each of the pistons.

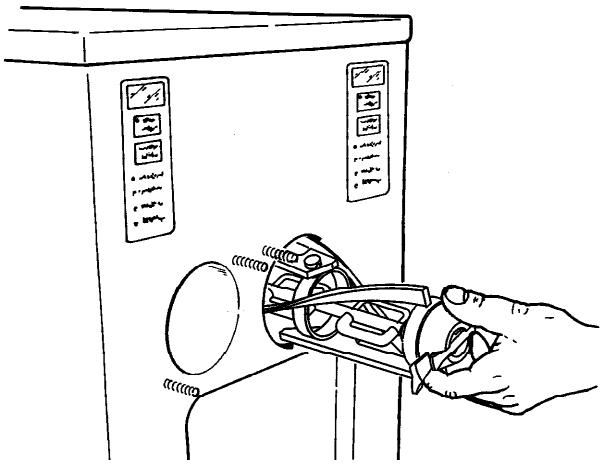


Turn the dispensing head over and remove the two large orings from the rear of the dispensing head.

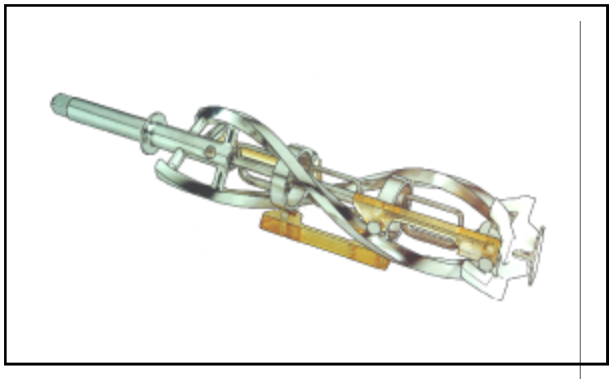


D) Disassembling the Beaters / Augers

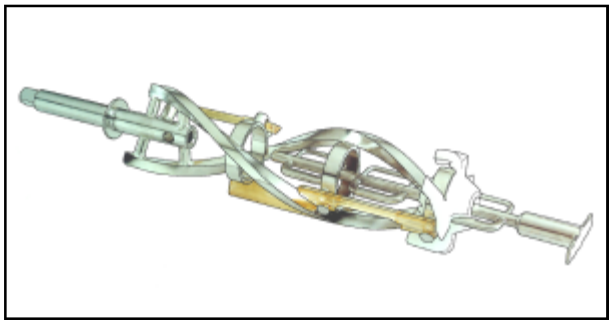
Remove the beaters / auger assemblies from each cylinder by pulling straight out of the machine towards you.



Disassemble each beater / auger by first removing the rear rubber beater shaft seal.

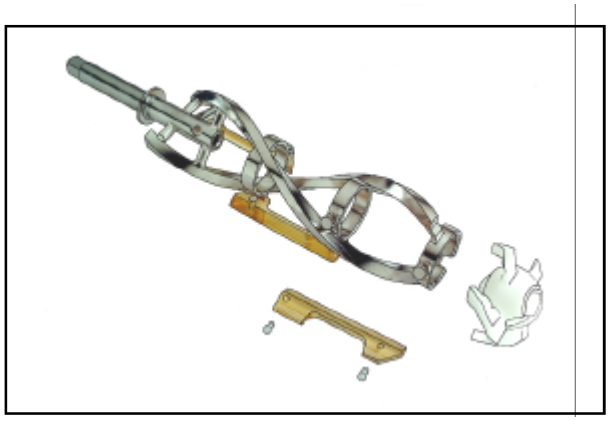


Next disassemble the center idler from each beater / auger frame. To remove, pull the idler straight out of the front of the beater / auger.



Finally, remove the beater / auger end pusher by pulling straight out of the beater / auger frame.

Remove the three scraper blades from the beater / auger frame by gently rotating the blade out of the frame support brackets.



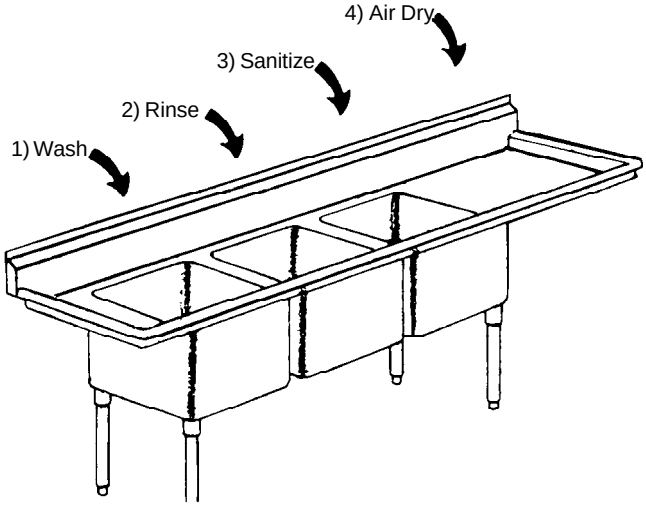
The machine is now completely disassembled. The removed parts must now be washed, rinsed, and sanitized.

E) Cleaning Operation

Wash the removed machine parts in luke warm (80-90 F) water and mild non-foaming detergent. Scrub each of the parts with the cleaning brushes provided in the machines spare parts kit.

!! IMPORTANT !!

DO NOT use hot water on any of the plastic parts as this may result in damaging these parts.

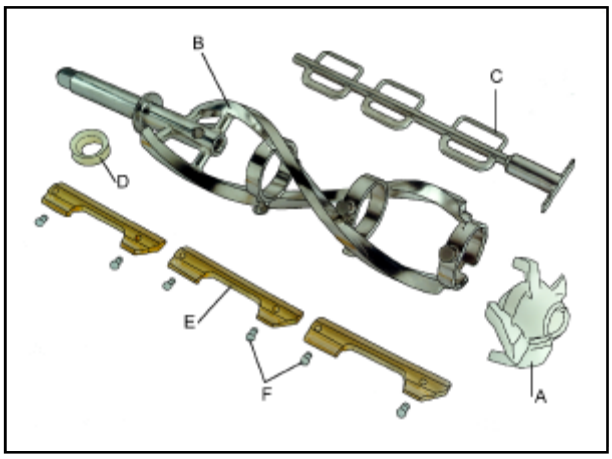


Using your three-tank sink, wash rinse, and sanitize all of the disassembled machine parts. Mix the sanitizing solution to a 200ppm concentration with warm water. Allow the parts to soak in the sanitizing solution for 3-5 minutes before removing. Allow the parts to air-dry on the clean, sanitized counter at the end of the sink. ***DO NOT*** towel or sponge dry these parts.

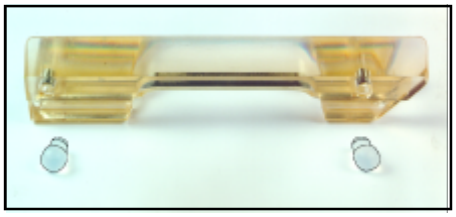
Part IV - Assembling the Freezer

A) Assembling the Beater / Augers

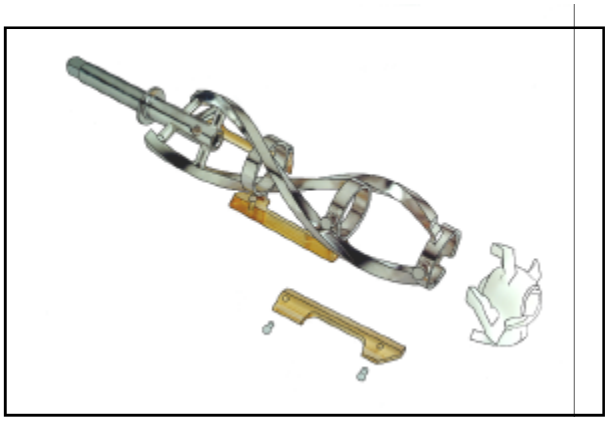
After completing the Cleaning Operation, you are now ready re-assemble the freezer. First locate the parts needed to assemble both beater / auger assemblies. A) End pusher, B) Beater frame, C) Idler, D) Beater seal, E) Scraper Blades (3per), F) Blade bumpers (2 per blade)



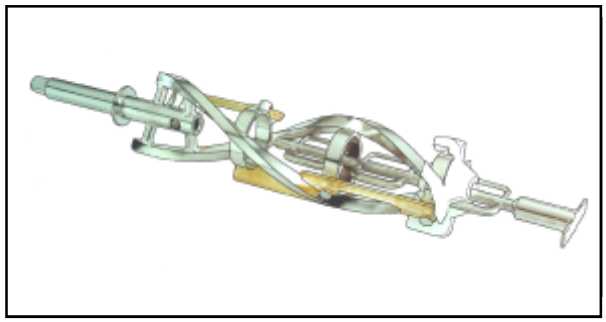
Install the rubber bumpers into each scraper blade. *NOTE: Keep the large end of the bumper opposite the blade groove.*



Assemble the scraper blades onto the beater frame by inserting the blade into the support and rotating downward. Install the end pusher into the beater frame making sure to engage the alignment notch of both the beater and end pusher.

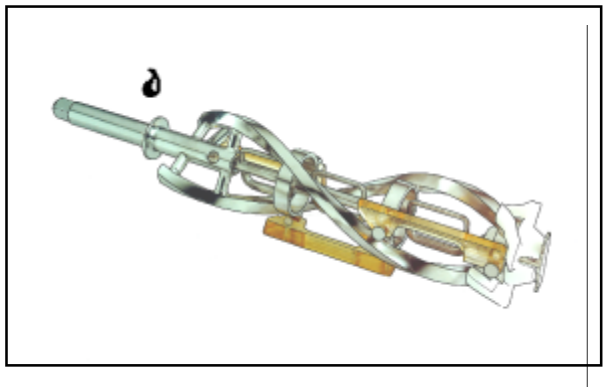


Install the idler into the beater frame by placing it through the end pusher.

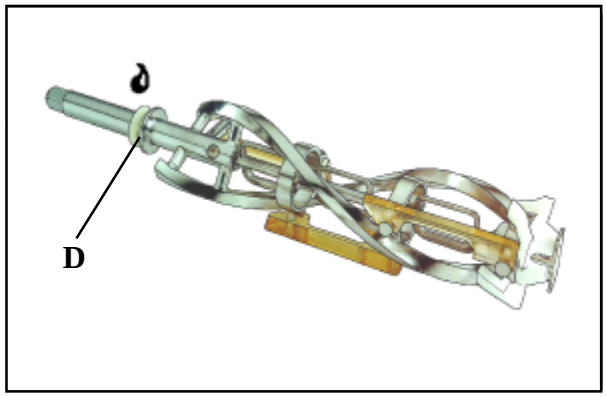


NOTE: When installed correctly, the idler should rotate freely inside the beater frame. If the idler does not rotate freely, it is incorrectly installed and MUST NOT be installed into the machine. Repeat the above instructions until the idler is installed correctly.

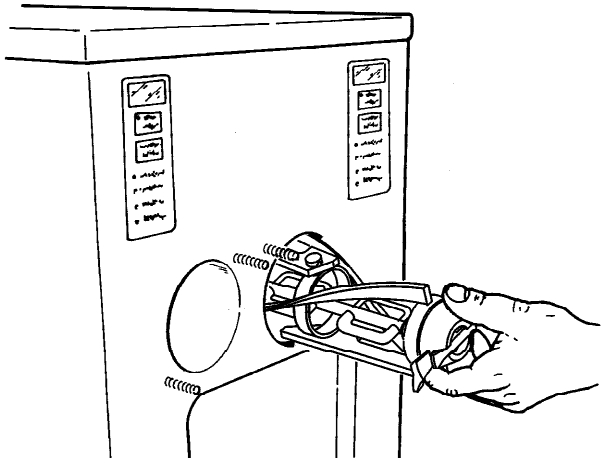
Next, lubricate the rear of the metal washer on the beater frame with three 3/8 ” drops of the sanitary lubricant spaced equally on the washer.



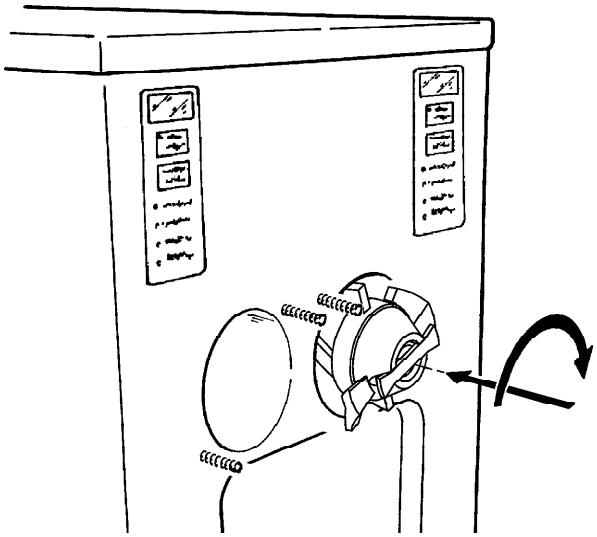
Slide the rubber beater seal onto the beater frame end. Using the sanitary lubricant, place three more 3/8” drops of lubricant on the flat side of the beater seal (next to the beater shaft). DO NOT lubricate the “V” groove of the seal as this is not the sealing surface of the seal.



Insert both beater assemblies into the freezing cylinders. Holding the beater horizontal, gently slide it straight into the cylinder until it can go no farther.



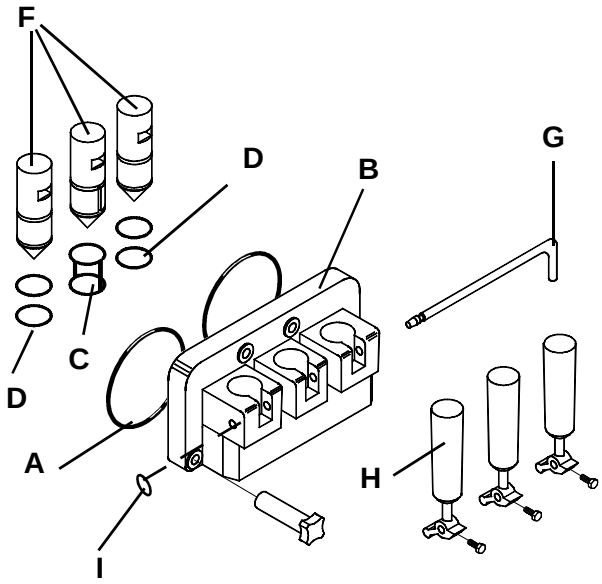
Once installed, rotate the beater assembly to engage the beater frame into the drive coupling in the transmission. This engagement will allow the beater frame to go another ¾" into the cylinder. Push the beater frame until it can go no further.



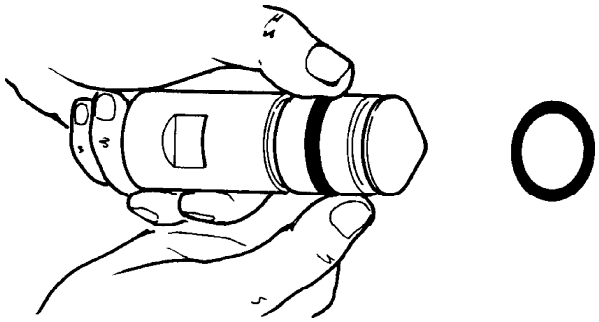
After installing and engaging both beater assemblies, rotate the center idlers to a vertical position. This will ensure that they will correctly engage the pins on the rear of the dispensing head.

B) Assembling the Dispensing Head

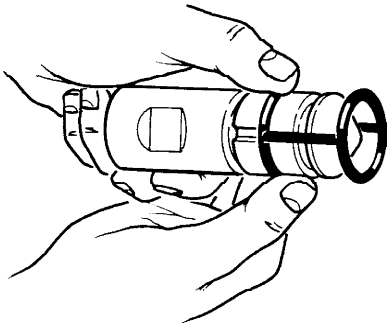
Locate the parts that will be needed to assemble the dispensing head. These parts include: A) Dispensing head orings, B) Dispensing head, C) Center piston oring,
D) End piston orings (4), F) Pistons, G) Handle retaining rod, H) Dispensing handles, and I) Retaining rod oring.



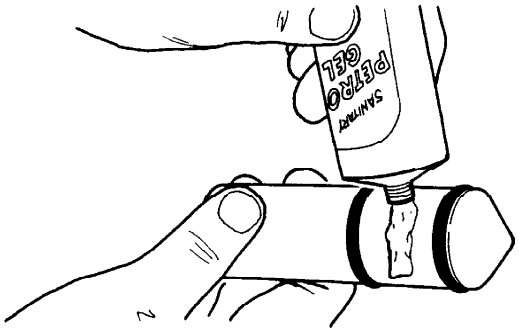
After locating all of the required parts, start by assembling orings onto the end pistons.



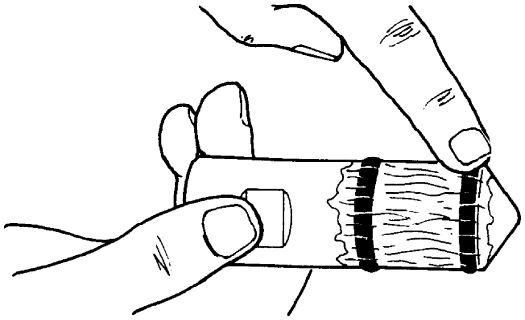
Install the center piston oring onto the center piston.



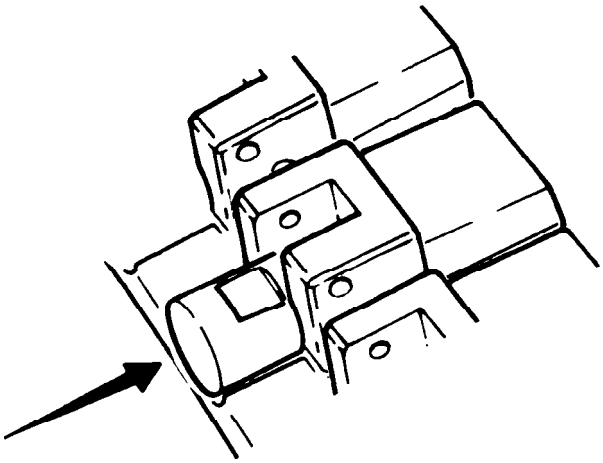
Once the orings have been installed onto the three pistons, place a bead of lubricant between the orings.



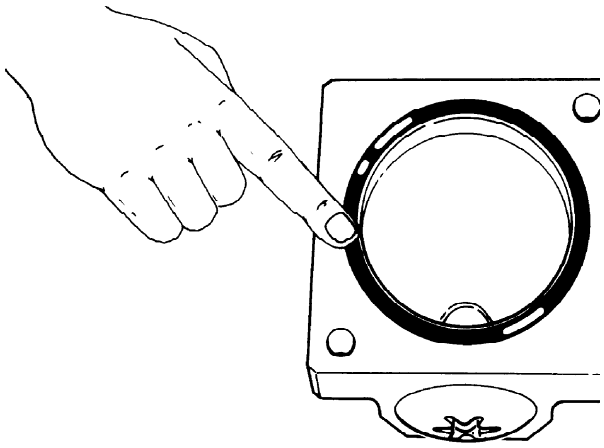
Spread the lubricant to lightly coat the piston surface between and including the orings. This will ensure free movement of the pistons and dispensing handles.

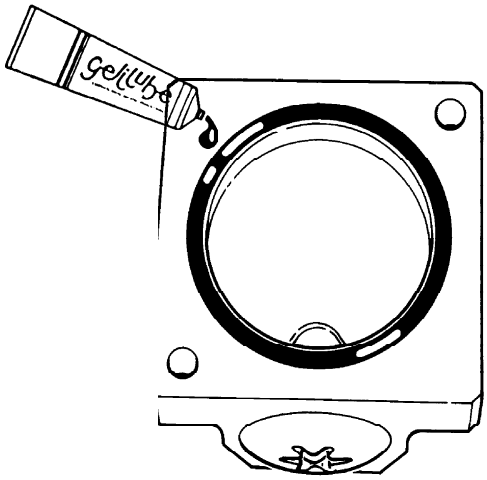


Insert the center piston into the center chamber of the dispensing head. The center piston is identified with the one piece “H” type oring. When installing, align the square handle recess with the rectangular cut out of the head. Repeat this process with both end pistons.

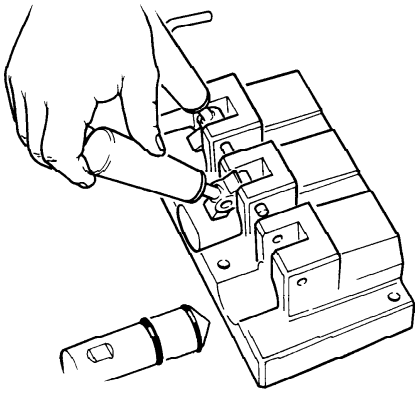


Turn over the dispensing head and insert the two large orings into the grooves in the dispensing head. *Lightly* lubricate the outside of these orings.

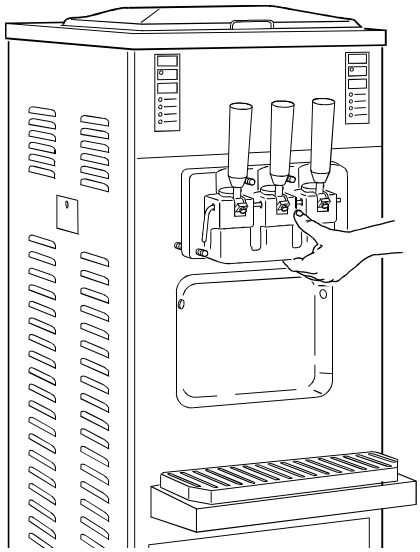




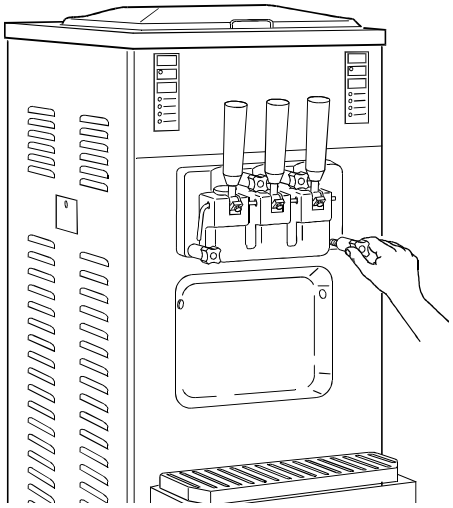
Install the dispensing handles onto the head by placing the rounded side of the metal cam into the piston notch. Insert the metal retaining rod into the dispensing head and piston cams. When all three handles are installed, affix the small oring into the metal retaining rods oring groove.



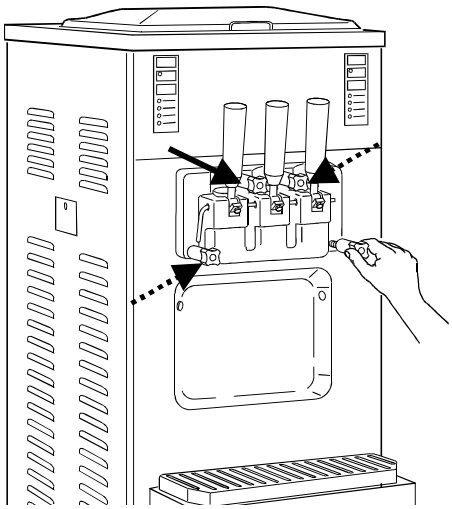
You are now ready to install the dispensing head assembly onto the front of the freezer.



Finger tighten the four metal dispensing head-retaining knobs.

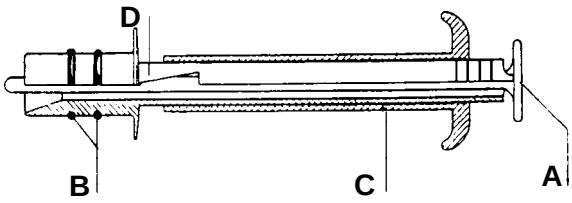


Hand tighten the knobs in a criss-cross pattern as shown below.

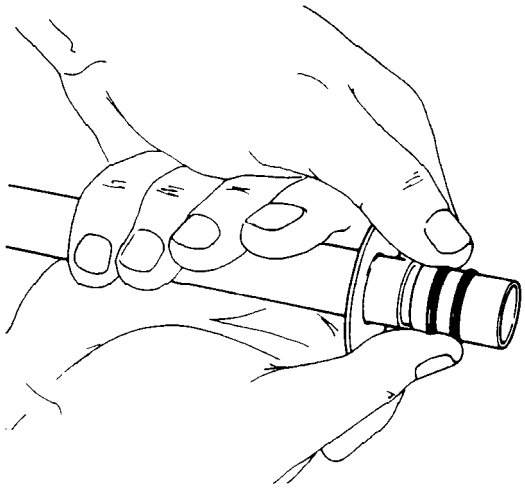


C) Assembling the Gravity Feed Tubes

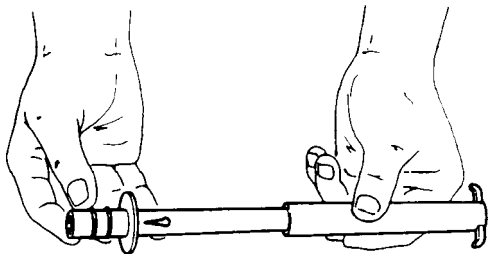
Locate the parts needed to assemble the gravity feed tubes. This should include: A) Splash guard, B) Orings (2per), C) Outer regulating sleeve, D) Center gravity feed tube



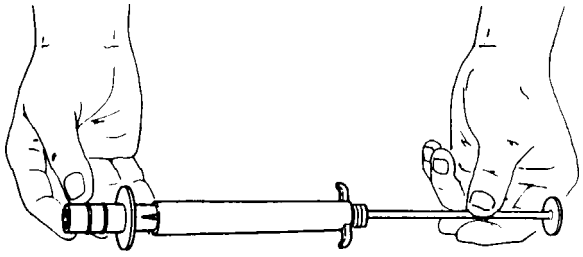
Next, slide the two orings onto the center gravity feed tube oring grooves.



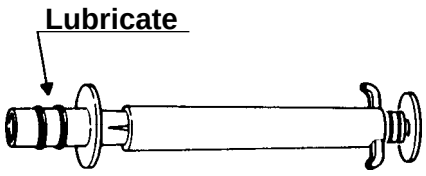
Slide the outer regulating sleeve onto the center feed tube. Make sure that the two finger hooks are at the top of the feed tube (farthest away from the orings at the bottom).



Insert the splash guards into the top hole of the gravity feed tube.



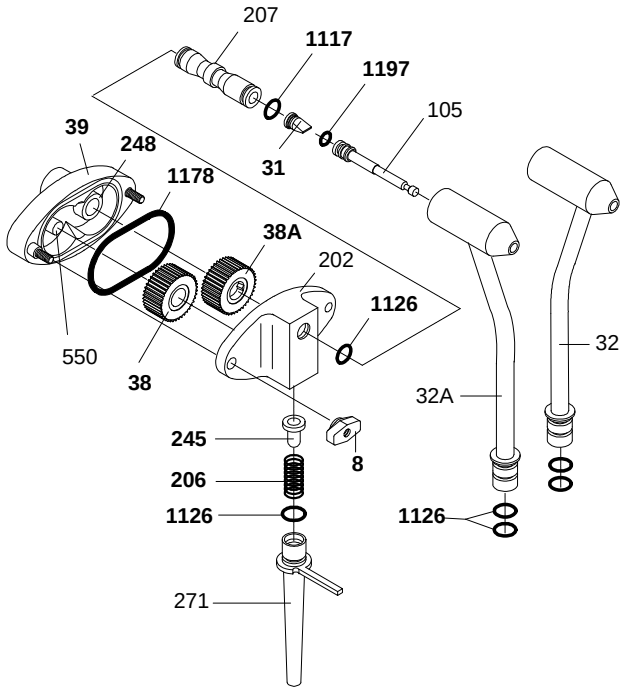
Lightly lubricate both orings on each tube with the sanitary lubricant. When finished, place a feed tube uninstalled at the bottom of each mix tank.



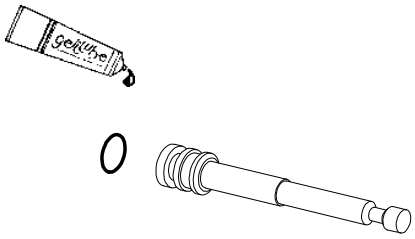
The machine is now completely assembled and ready to be sanitized.

D) Assembling the Mix Injection Pump

Before assembling the mix injection pumps, locate all of the parts that will be required.
(See Below)

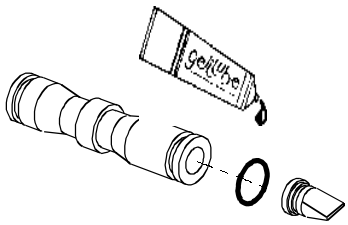


First install the small oring (#1197) onto the pressure relief plunger (#105) and lightly lubricate the oring.

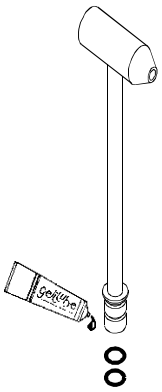


NOTE: Oring #1126 is slightly smaller than the other orings used on this assembly. Locate these orings first and install.

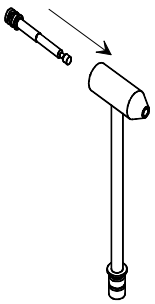
Assemble the connecting tube (#207) with the check valve (#31) and orings (#1126) and (#1117). Lightly lubricate the check valve before installing into the connecting tube.
Lightly lubricate both orings.



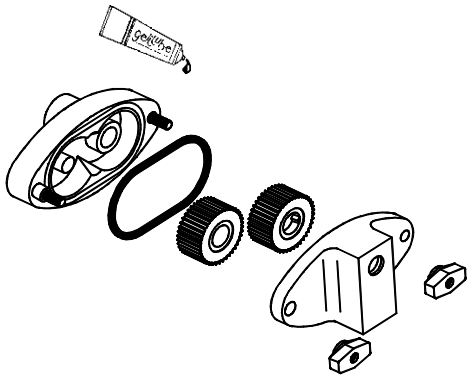
Install the two orings (#1126) into the bottom grooves of the feeding elbows (#32) then lightly lubricate.



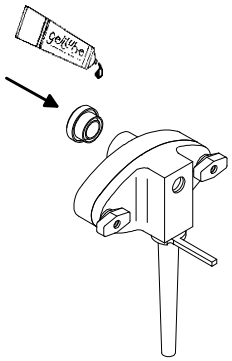
Install the assembled pressure relief plunger into the feed elbows, small end first. Next install the assembled connecting tube into the mix feed elbow, check valve first. The feeding elbows are now completely assembled and can be placed into the bottom of the mix storage tanks.



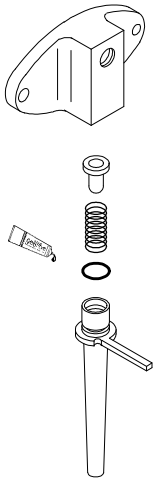
To assemble the mix pumps, first locate the pump gears (#38&#38A) and pump body (#39). Lightly lubricate the top, bottom, and inside bore of the gears. Install the gear into the appropriate gear well. Install and lubricate oring (#1178) into the pump body (#39).
NOTE: DO NOT lubricate the gear teeth since this is removed when the pump starts running.



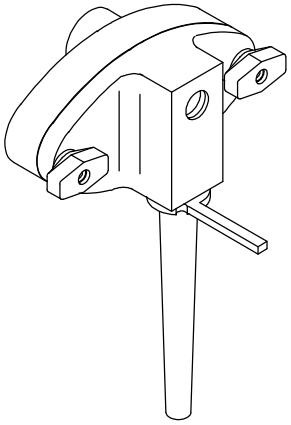
Install the mix pump drive shaft seal into the rear of the mix pump body. *Lightly* lubricate the inside of the shaft seal then install the drive shaft into the pump seal engaging it into the drive gear.



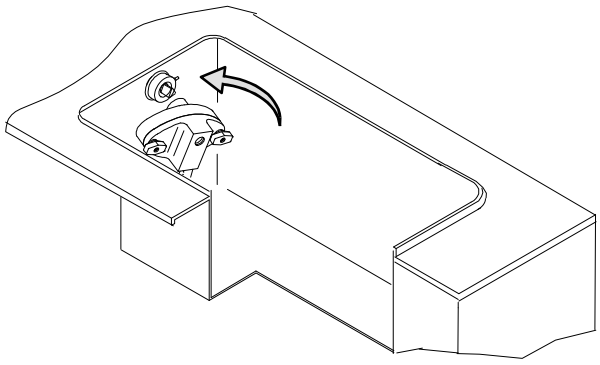
Install the pump body assembly into the rear hub inside of each mix storage tank. Slide the drive shaft into the rear hub and rotate the pump until the hook stud engages the pin on the rear hub. At this point, you must ensure that the drive shaft is engaged into the rear drive coupling by turning the drive gear until it completely engages.



Assemble the plastic suction tube (#271) by installing the oring (#1126) into the groove and lightly lubricate. Next lightly lubricate the base (flat part) of the relief valve (#245) and install into the well of the mix pump cover (#202).
Install the spring (#206) onto the relief valve in the pump well. Install the suction tube with lubricated oring into the pump cover well engaging the spring into the suction tube recess. To lock the suction tube onto the pump cover, rotate, the tube until the adjustment lever is pointed away from the pump cover (6 o'clock position).



You are now ready to install the pump cover with suction tube onto the pump body assembly, which is installed on the rear pump hub in the mix storage tank. To install the cover, first ensure that the oring (#1178) is installed into the pump body (#39). Next, affix the pump cover onto the pump body using the two metal retaining knobs (#8).



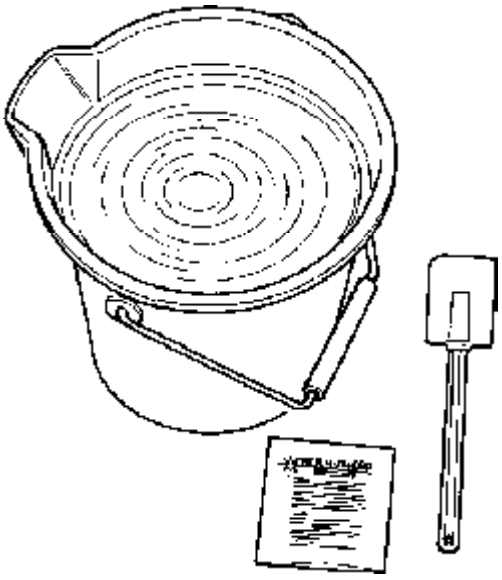
The freezer is now completely assembled and must be sanitized prior to adding fresh mix and operating.

Part V - Sanitizing the Freezer

Prior to filling the machine with fresh liquid mix, the assembled machine must be sanitized. The frequency of cleaning and sanitizing must comply with your local and / or state health regulations. If uncertain of these regulations, contact your local Health Departments or Department of Agriculture.

Sanitizing your freezer is very important. This procedure will retard the growth of bacteria and insure excellent product bacteria test results performed by your local inspectors.

To begin, you will need the sanitizer, spatula, large cleaning brush, (all included in the start up kit), and clean pail.

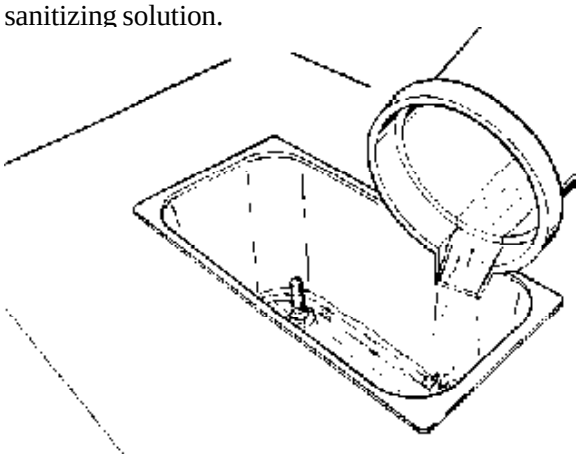


Mix the sanitizer (Stera Sheen green label or equivalent) into the clean pail with at least two gallons of warm water. Mix the sanitizer and water to make a 200-PPM. concentration of sanitizer solution. Using the spatula, stir the solution until the sanitizer is completely dissolved.

!! IMPORTANT !!

Do not exceed the formula recommended by the sanitizer manufacturer as it will not add to the sanitizing effectiveness. DO NOT use straight chlorine bleach since it does not clean properly and will damage plastic components. Do not leave the sanitizing solution in the freezer longer than one hour as it can corrode some parts.

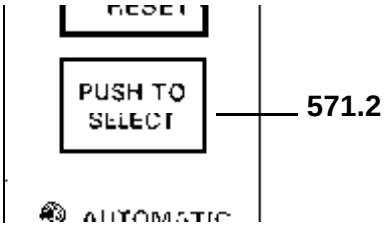
With the dispensing handles closed, pour an even amount of the sanitizer solution into both mix tanks. With the large cleaning brush, clean all surfaces of the mix storage tanks with the sanitizing solution.



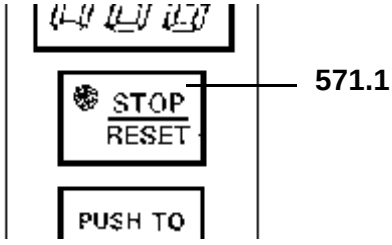
With the cylinders full of the sanitizer solution, push the "Push to Select" button on the front touch pad (#571.2) until the beater mode is selected. Allow the machine to run in the beater mode for approximately 30 seconds.

!! IMPORTANT !!

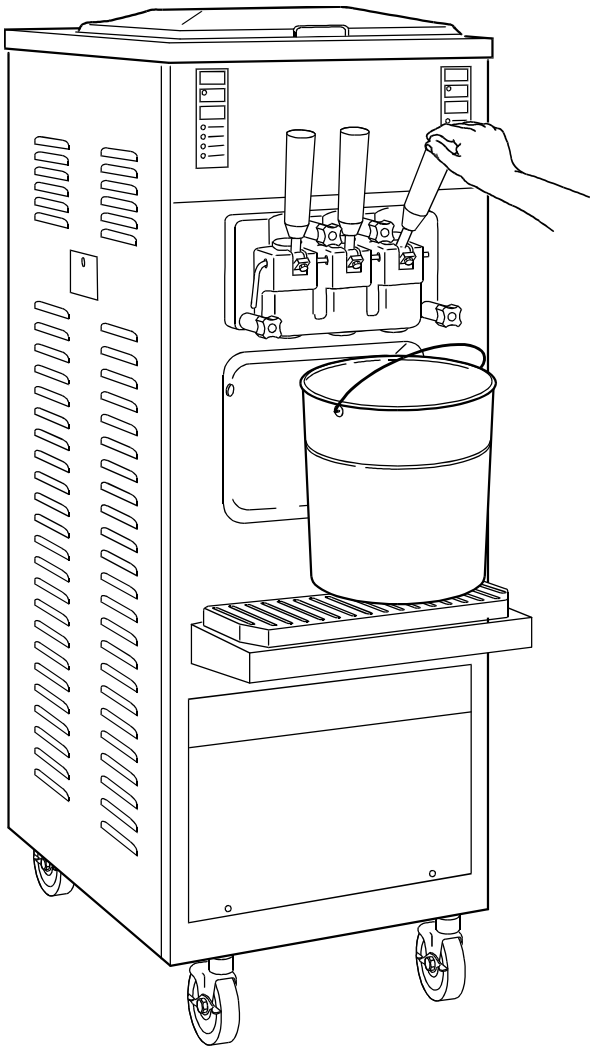
Do not select the "Automatic" or "Stand-By" modes while sanitizer is in the machine as this can possibly damage your freezer. Select only the "Beater "mode while cleaning or sanitizing the freezer.



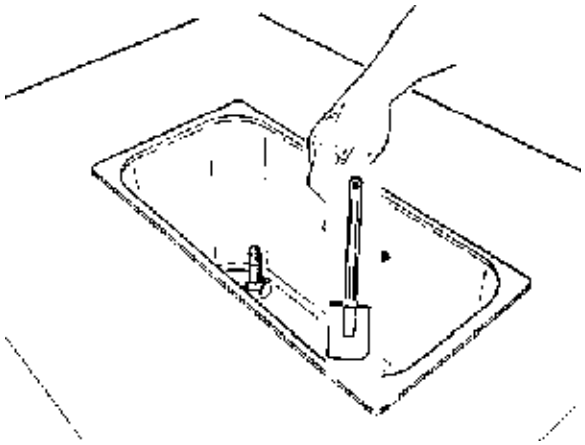
Press the "Stop – Reset" button (#571.1) and place the machine in the OFF / Stop mode. Allow the sanitizer to remain in contact with all of the product surfaces for 3 to 5 minutes.



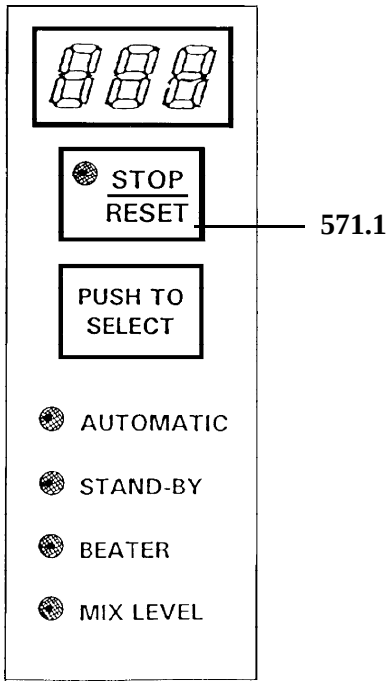
Place the clean pail under the dispensing head and pull the handles, allow the sanitizer to completely drain from the freezer.
After the sanitizer has completely drained, close the three dispensing handles.



With your spatula, direct any remaining liquid in the bottom of the tank to the cylinder feed hole.



"Push to Select" button on the front touch pad (#571.2) until the beater mode is selected. Allow the machine to run in the beater mode for approximately 10 seconds then push the "Stop" button on the touch pad. This will remove any of the remaining sanitizer from the cylinders.



!! IMPORTANT !!

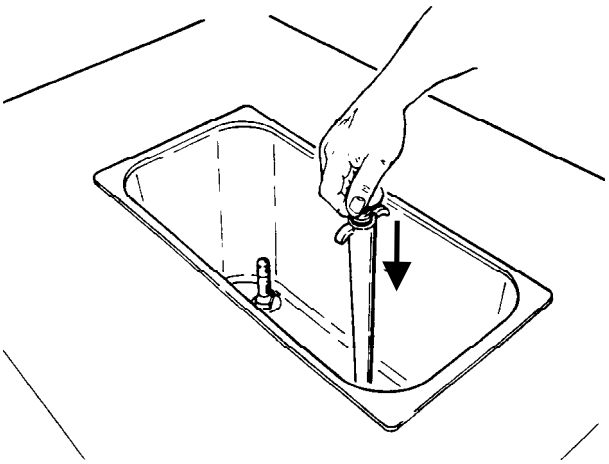
The freezer is now sanitized and ready to be filled with fresh liquid mix. Do not wipe out any residual sanitizing solution from the bottom of the mix storage tanks as this will contaminate the machine with bacteria. Prior to dumping the sanitizing solution from the pail, submerse your hands to sanitize since you must next install the Gravity Feed Tubes or Pump Feed Elbows into the cylinder feed hole.

Part VI – Starting the Freezer

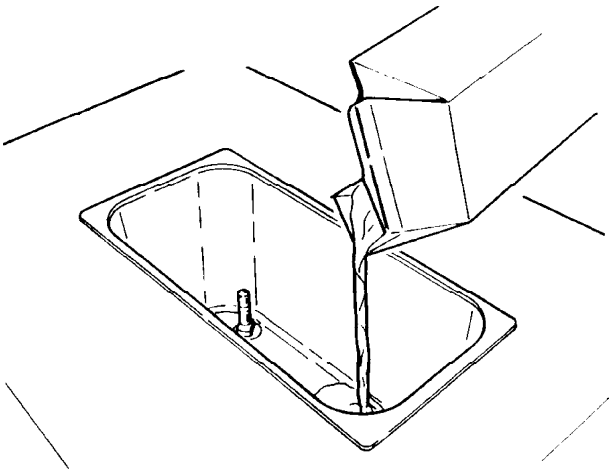
Only after completing the cleaning and sanitizing procedures should you fill the machine with fresh mix. The mix being used *MUST* be free of ice, seeds, pulp, and completely dissolved if made from powder. The products used in these freezers must be a homogenous liquid.

A) Gravity Fed Machine

With your clean, sanitized hands, remove the splash guard and outer regulating sleeve from the gravity feed tubes. Install only the center feed tube into the cylinder feed hole. Reinstall the splash guard on both tubes

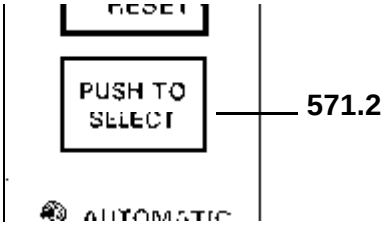


Fill each mix tank with fresh liquid mix. Each mix tank has a maximum capacity of 18 quarts. The minimum recommended mix quantity is 6 quarts.



Allow the cylinders to fill with mix. When the air bubbles stop coming out of the gravity feed tube, the mix has filled the cylinder to its maximum capacity. Remove the splash guard and install the outer regulating sleeve onto the gravity feed tube.

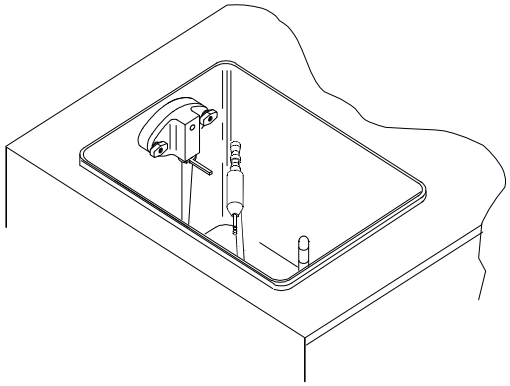
Set to the closed position (bottom) and replace the splash guard.
You may now start the freezing process by pressing the “Select” button (#571.2) and selecting the Automatic mode.



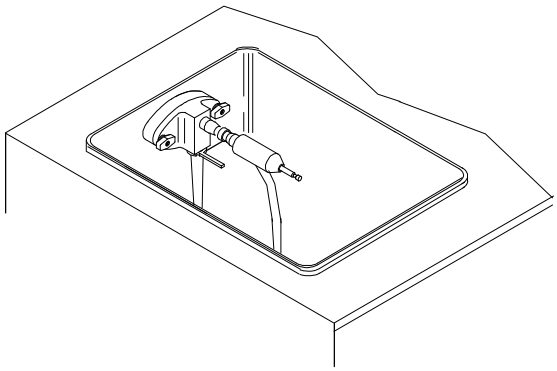
The initial freeze time is approximately 4-7 minutes. Do not dispense product until the machine has cycled off. Before dispensing product you must also open the outer regulating sleeve on the feed tube. The draw rate, portion size, and mix viscosity will determine the final regulating sleeve setting. Our standard setting is 2 or 3 notches up from the bottom. Adjust for your specific application.

B) Pump Fed Machines

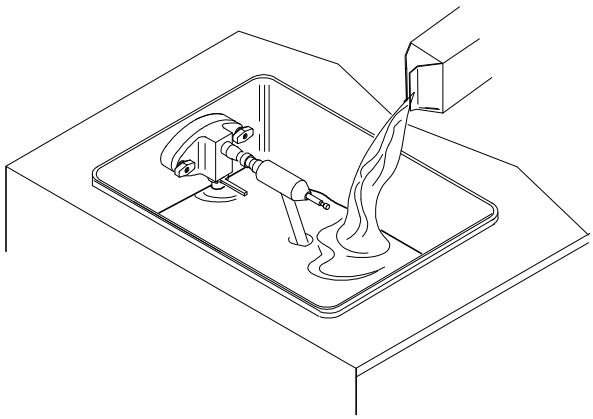
With your clean, sanitized hands, install the feeding elbows into the cylinder feed holes. Next slide the elbow connecting tube into the pump cover hole.



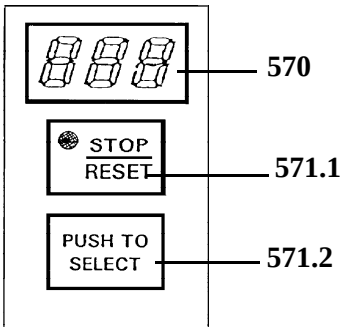
Holding the connecting tube inside the pump cover hole, slide the feeding elbow away from the pump. This will seat the tube and elbow to prevent the tube from sliding out when under pressure.



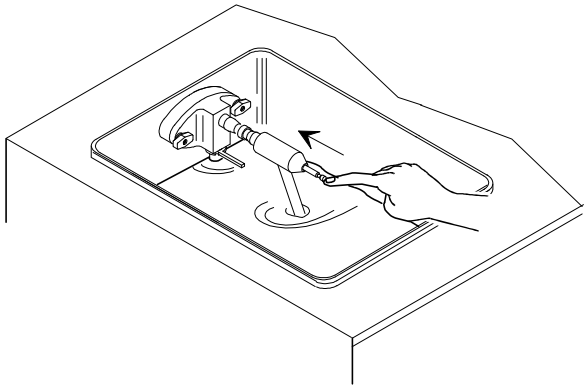
Fill each mix tank with fresh liquid mix. Each mix tank has a maximum capacity of 18 quarts. The minimum recommended mix quantity is 6 quarts.



With the mix tanks filled with liquid mix and the elbows connected to the pumps, you can now prime the cylinders. To prime the cylinders, press the "Select" button on the touch pad, selecting the "Beater" only mode. Allow the machine to run for approximately one minute the press the "Stop" button.



Carefully push the plastic bleed plunger, which extends from the front of the feeding elbow. This will allow the air to escape from the cylinder.



When all of the pressure is released, press the "Select" button and switch to the "Beater" only mode for one minute. After one minute, press the "Stop" button and carefully push the plastic bleed plunger, which extends from the front of the feeding elbow.

Repeat this process until a steady stream of mix only is flowing from the bleed hole on the feeding elbow.

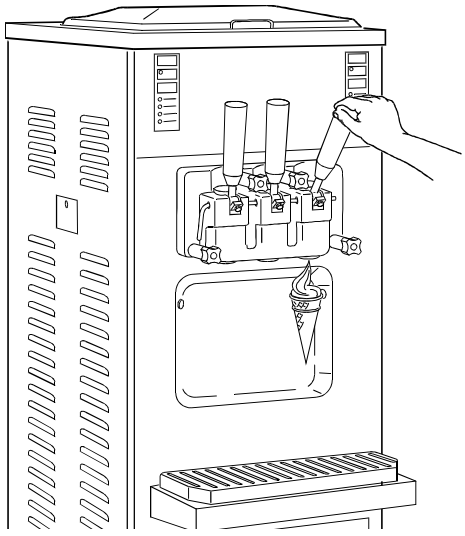
You may now start the freezing process by pressing the "Select" button (#571.2) and selecting the Automatic mode.

The initial freeze time is approximately 4-7 minutes. Do not dispense product until the machine has cycled off. The draw rate, portion size, and mix viscosity will determine the final regulator tube setting. Adjust for your specific application.

Part VII – Operating the Freezer

The machine will automatically stop the freezing process after achieving the pre-set "consistency" value (number displayed on the touch pad monitor). This will indicate that the product is ready to be served. At this time the compressor will continue to run and automatically switch to cooling the mix storage tanks.

To serve product, simply place a cup, container, or cone under the dispensing spout and slowly pull the dispensing handle down. At this time the beater / auger drive motor should start and product start coming out. As the product begins to flow, move the container in a circular fashion to create a tapering tower if frozen product.

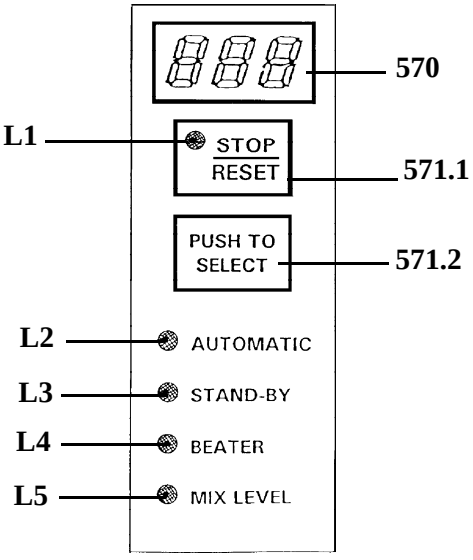


When the desired portion has been dispensed, close the handle and pull the container with product straight down to add a peak.

Dispense the product without exceeding the freezers production capacity. If you do not exceed this pace and are careful to refill the machine with fresh mix, you can be sure you will rarely have to pause in selling product, even during peak times. A standard draw rate is ¾ to 1 ounce of product dispensed per second. The larger the portion size, the slower it should be drawn.

A) Stand-By Mode

During long pauses between servings, press the "Push to Select" button (#571.2) and select the "Stand-By" mode of operation. In this mode, you will significantly reduce the energy consumption of the freezer. When placed in this mode the indicator light L3 will illuminate. The mix temperature in both cylinders and mix storage tanks are maintained below 40 degrees F by the electronic temperature probes. Product should not be served while in this mode as it will be too soft. The Monitor (#570) will only display the temperature in the mix tank while in this mode.



When you want to begin serving product again, press the
"Push to Select" button (#571.2) and select the "Automatic" mode. Allow the machine to cycle off on the consistency control before serving product.

B) Gravity Fed Machines

The gravity feed tube consists of two tubes, one sliding inside of the other, and a center splash guard. The inner tube blends the flow of air and mix into the freezing cylinder. Air enters through the top of the tube, mix through the bottom. (Refer to figure 9)

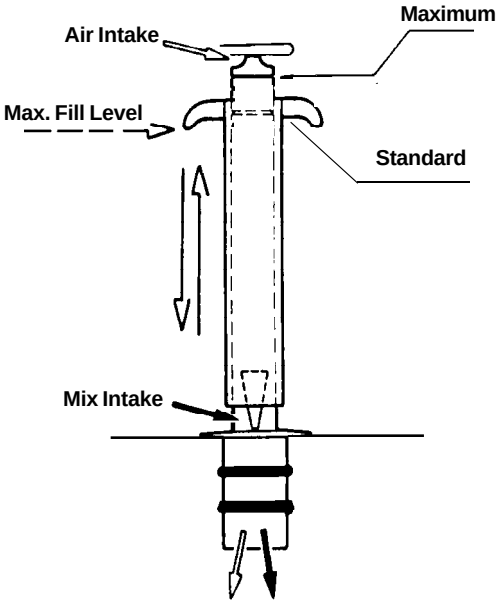


Figure 9

The outer tube is actually a regulating valve. Lifting or closing this outer tube changes the hole opening size on the inner tube which allows more or less mix to enter the freezing cylinder. Since the air inlet hole size does not change, the air inlet is constant.

You can vary the overrun (yield) by allowing more or less mix to enter the cylinder by changing. You do this by opening or closing the outer regulator sleeve setting on the inner feed tube.

The inner splash guard keeps mix from splashing the underside of the mix tank cover as well as eliminate clogging of the feed tube.

The draw rate, portion size, and mix viscosity will determine the final regulating sleeve setting. Our standard setting is 2 to 3 notches up from the bottom. Open the outer tube to increase the mix amount. Close the outer tube to decrease the mix amount. Adjust for your specific application.

C) Pump Fed Machines-Operation

The mix injection pump runs whenever the beater drive motor is turning. To regulate the amount of mix being injected into the cylinder, pivot the pump suction tube either to the right (less mix/more air) or to the left (more mix/ less air). (Refer to figure 10)

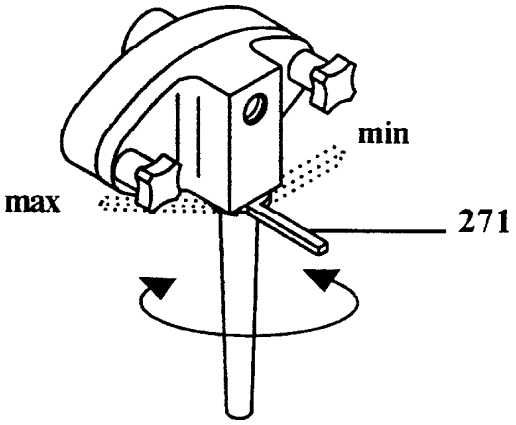


Figure 10

The air intake is through the front two holes of the pump cover. Since the two air inlet holes are fixed, the air intake is constant. To adjust your overrun (yield) you must regulate the amount of mix being pumped into the cylinders. The mix pump suction tube will change the orifice size on the tube to allow either more or less mix to be pumped into the cylinder.

You will also have to adjust your pump suction tube during daily operation to either a larger (Left) or smaller (Right) orifice setting depending on your draw rate and product viscosity.

For heavy draw rates and / or thick viscosity mixes, a setting of center, one, two, or three positions to the left of center will be necessary in order to operate the machine properly.

For light draw rates and / or thin viscosity mixes, a setting of center, one, or two positions to the right of center will be necessary.

The “Normal” operating position for the suction tubes on this freezer is either one position to the left, center, or one position to the right.

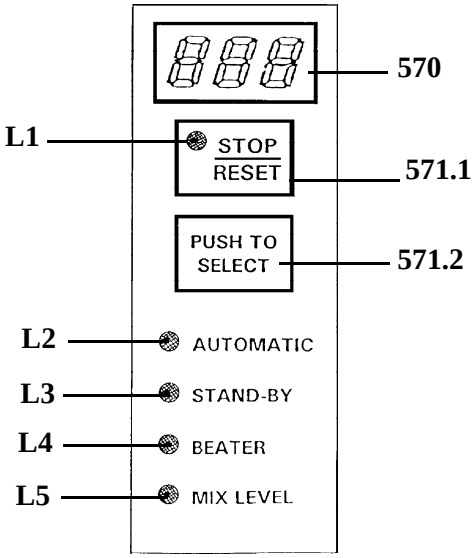
Part VIII – Periodic Cleaning Procedures

Cleaning and sanitizing schedules for your freezer are determined by your local Health Department and / or Department of Agriculture and must be followed accordingly. Check with your local organization prior to determining your cleaning schedule.

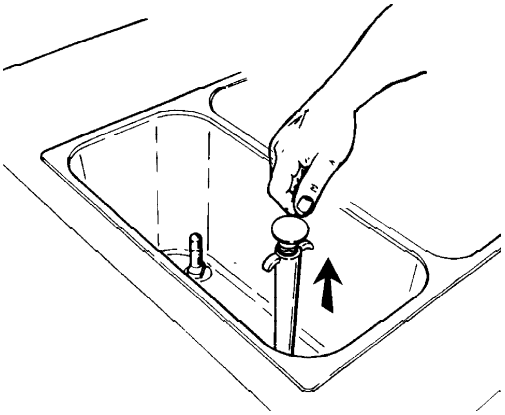
After determining your schedule, proceed as follows:

A) Gravity Fed Machines

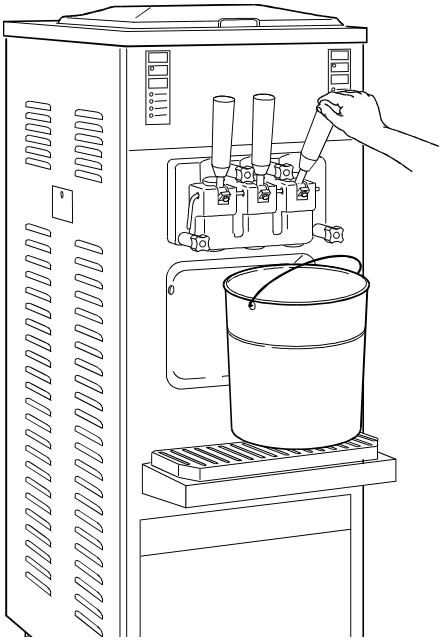
With frozen mix in the machine, select the Beater mode on the front touch pad by pressing the Push to Select button (#571.2) until pilot light #L4 illuminates. Allow the machine to operate in the beater mode for 4 to 5 minutes. This will soften the product and allow for easier product removal.



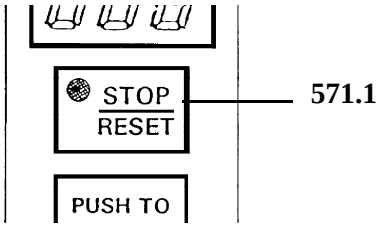
Remove the gravity feed tube assemblies from each mix tank by pulling straight up and out of each tank.



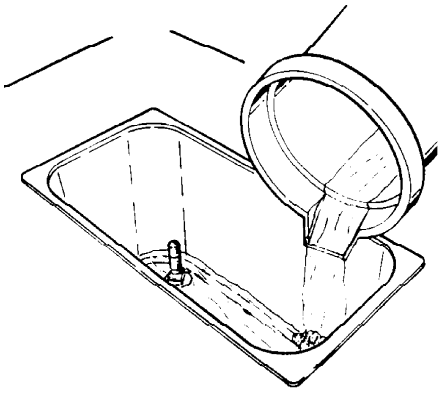
With the machine still in the Beater mode, place a pail under the dispensing head. Slowly pull the two end handles and allow all of the product to drain from the machine.



After the product has drained, press the Stop / Reset button (#571.1) on the front touch pad. This will turn the machine to the OFF mode.

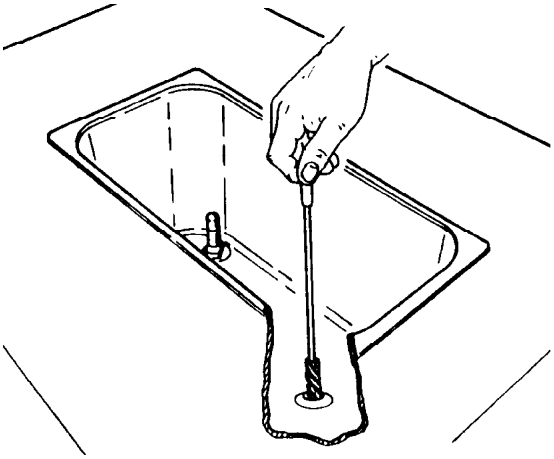


Fill each mix tank with luke warm (80-90F) water and a non-foaming dish washing detergent solution.

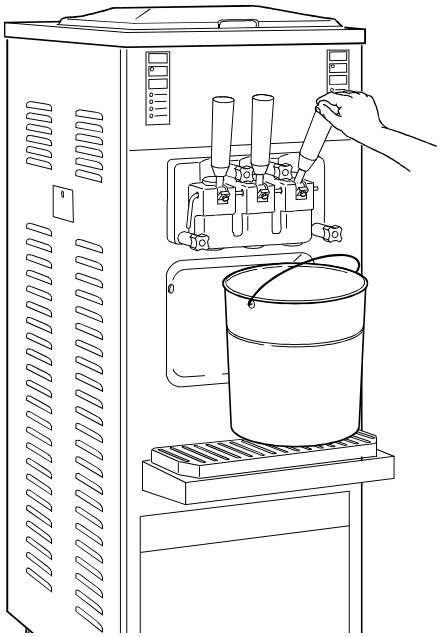


Press the Push to Select button on the front touch pad (#571.2), and carefully select the Beater mode. Allow the machine to run for 1 – 2 minutes then push the Stop / Reset button (#571.1) on the touch pad. Drain all of the water and soap solution from the machine. Repeat this process until the water drained is clear.

Prior to draining the last time, brush clean all surfaces of the mix storage tanks with the cleaning brushes provided with the freezer.



Drain the remaining water and soap solution from the freezer.



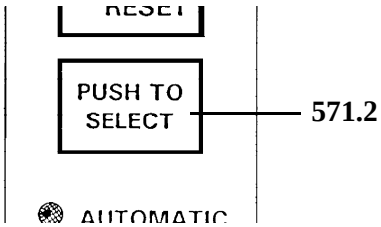
You are now ready to disassemble and clean your freezer. Please refer to Part III – Initial Cleaning Procedure of this operation manual for instructions on how to proceed.

!! IMPORTANT !!

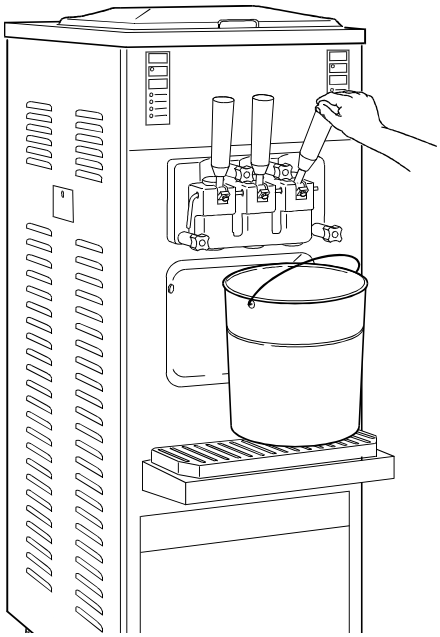
You MUST disassemble the machine after draining and follow the described cleaning and sanitizing procedures as described in this operation manual in order to maintain acceptable hygienic levels in your product.

B) Pump Fed Machines

With frozen mix in the cylinders, select the Beater mode on the front touch pad by pressing the Push to Select button (#571.2) until pilot light #L4 illuminates. Allow the machine to operate in the beater mode for 4 to 5 minutes. This will soften the product and allow for easier product removal.

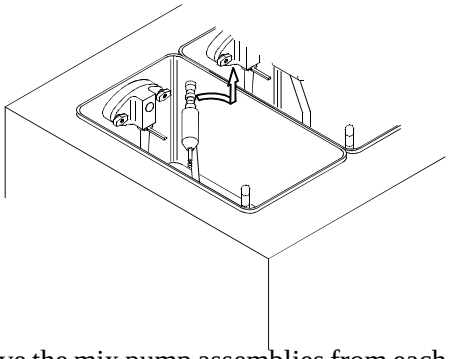


Place a pail under the dispensing head, holding it up against the bottom of the head as high as possible and slowly pull the two end dispensing handles. This will allow the mix to drain from the machine.

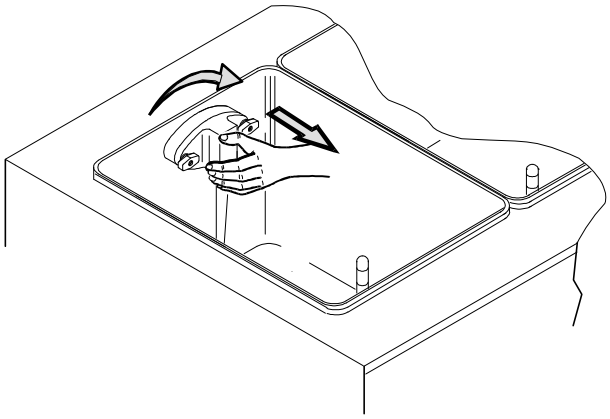


After the frozen product is removed and liquid mix is dispensing from the machine, press the Stop / Reset button (#571.1) on the touch pad. Placing the machine in the OFF mode, close both of the dispensing handles. Slowly push in on the pressure relief plungers to remove any remaining pressure from the cylinders.

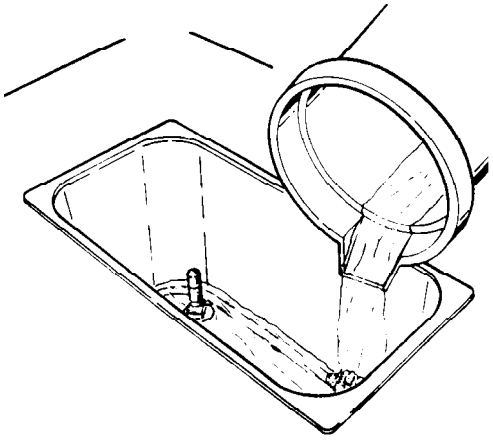
Remove the feeding elbow assemblies from each mix tank by first sliding the connecting tube away from the pump cover, Then turn the elbow assembly slightly and pull the assembly straight up and out of the mix tanks.



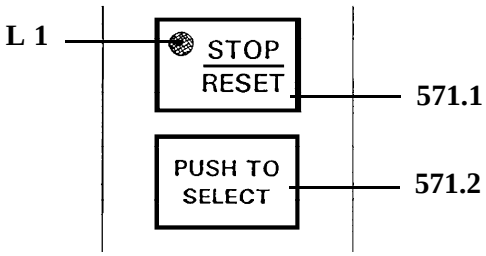
Remove the mix pump assemblies from each mix tank by rotating each pump clockwise until the hook stud disengages from the rear pump hub. After disengaging the hook stud, pull the pump assembly straight forward and out of the mix storage tanks. Please ensure that the mix pump drive shaft and seal must also be removed at this time.



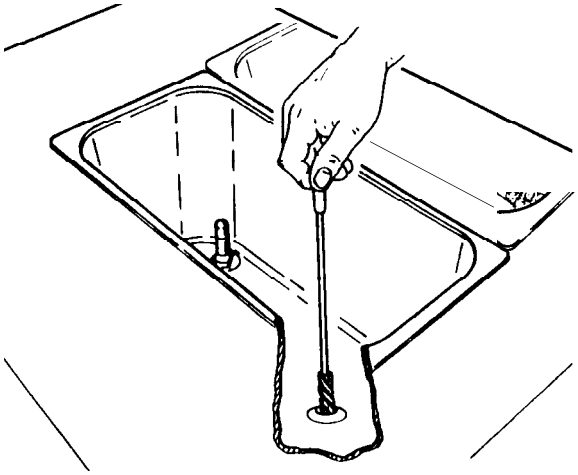
After removing the parts from the mix storage tanks, fill each mix tank with luke warm (80-90F) water and a non-foaming dish washing detergent solution.



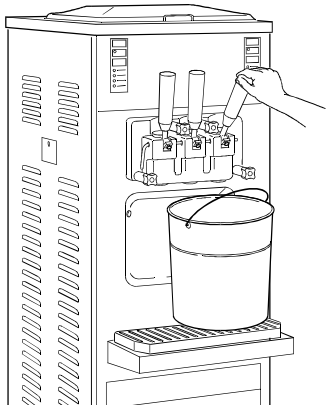
Press the Push to Select button on the front touch pad (#571.2), and carefully select the Beater mode. Allow the machine to run for 1 – 2 minutes then push the Stop / Reset button (#571.1) on the touch pad. Drain all of the water and soap solution from the machine. Repeat this process until the water drained is clear.



Prior to draining the last time, brush clean all surfaces of the mix storage tanks with the cleaning brushes provided with the freezer.



Drain the remaining water and soap solution from the freezer.



You are now ready to disassemble and clean your freezer. Please refer to Part III – Initial Cleaning Procedure of this operation manual for instructions on how to proceed.

!! IMPORTANT !!

You MUST disassemble the machine after draining and follow the described cleaning and sanitizing procedures as described in this operation manual in order to maintain acceptable hygienic levels in your product.

Part IX – Technical Information

A) Refrigeration:

Compressor – Hermetic / Low Temperature
Suction Pressure (Cylinder) – 18-20 psig.
(Mix Tank) – 20-25psig.
Discharge Pressures – 250 to 260psig.
Refrigerant Type – R-404A ONLY
Cooling Type – Air or Water
Cylinder valve type – TXV w/equalizer
Mix tank valve type – AXV
Refrigerant Charge- See Machine Data Plate

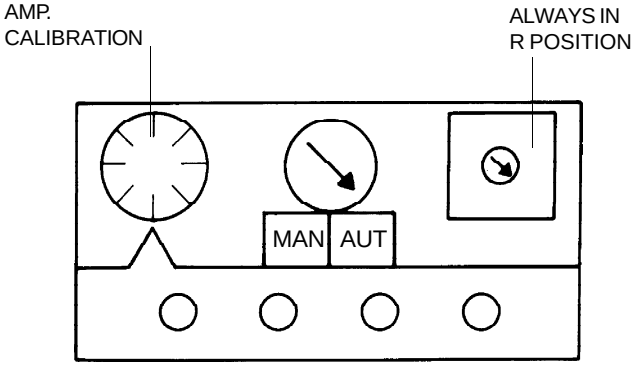
B) Beater / Auger Drive Motors

Motor Type – Leeson - ODP with C flange
Beater Rotation-(facing front of freezer) - CW
H.O.T Amps – 4.8 single phase
3.8 three phase
Minimum Operating Voltage – 200vac.
Maximum Operating Voltage – 240vac.

C) Thermal Overload

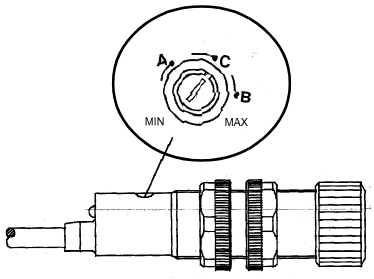
Overload Setting – 7.5 Amps (single phase)
5.0 Amps (three phase)
Overload Ranges –5.0– 8.5 amps – single phase
4.5–6.0 amps – three phase

Thermal Overload – Calibrations and Settings (Top View)



C) Proximity Switches

The sensitivity of these switches can be adjusted with a small screwdriver. The trimmer location is on the switch body nearest the front panel.
To adjust the sensitivity, you must remove the switch from its bracket attached to the front panel. The adjustment screw should be turned very carefully either in a clockwise direction to increase the range or counter clockwise to decrease the range of operation. Each switch should operate independently of one another except when product is drawn from the center dispensing handle which should activate both motors.



Part X – Maintenance

Your Coldelite freezer has been designed, engineered, and manufactured to achieve high performance and long durability. The life expectancy of any machine depends not only on the quality of engineering, and components used, but also on the basic maintenance procedures.

It is important for you to become familiar with a few of the basic operating procedures.

- Only remove orings with the oring extractor provided in the machine spare parts kit.
- Clean and sanitize the freezer in accordance with the instructions in this operation manual.
- Lubricate all orings and seals as instructed.
- The wearing or the improper cleaning of the beater shaft seals will result in product leakage into the rear of the machine. Check the side drip chutes frequently and replace seals when necessary.
- Replace any oring that is leaking or damaged.
- When all of the spare parts supplied in the spare parts kit are used, re-order immediately. Do not wait until the part is urgently needed or causes the machine to be inoperative without it.
- ***NEVER*** use the Automatic or Stand-By mode in the cleaning, sanitizing or initial filling of the freezer. This can damage the freezer and its components.
- During the washing, cleaning and sanitizing procedures, operate the machine in the BEATER mode as little as possible. This will minimize component wear on the freezer.
- When removing and installing the freezer parts, handle these with care. ***DO NOT*** drop or bang together as this will damage the parts and affect the freezers performance.
- ***NEVER*** use ***HOT WATER*** when washing, cleaning, or sanitizing your freezer or its parts. ***ALWAYS*** use luke warm water (80 - 90F).

!! IMPORTANT !!

If your machine is Air Cooled, its efficiency depends on a clean air cooled condenser. The fins of the condenser must be straight and cleaned a minimum of every two or three months. Prior to cleaning the air condenser, place the machine in the STOP or OFF mode and disconnect power to the freezer.

If your machine is Water Cooled, it is important that it is not stored at a temperature below 32 degrees F. Before storing at a temperature below 32 degrees you must remove all liquids from the freezer and winterize the water condenser coil. This should be performed by an authorized service technician to avoid damage to the freezer.

The following is a recommended wearable parts replacement schedule. This is for normal operation of the freezer and will vary based on the volume and type of product served as well as operational and cleaning procedures.

Replacement Schedule

Orings and Seals – Every 6 months or as needed
Beater Scraper Blades - Every 6 months or as needed
Beater End Pusher – Every year or as needed **(Maximum of 3 Seasons of Operation)**
Drive Belts – Every 2 years or as needed
Pump Gears – Every 3 years or as needed
Pump Drive Bearings – As needed
Plastic Parts - As need when leaking, scratched, or broken
Rebuild Mix Pumps – Every 5 years or as needed
Check Gearbox Grease Levels – Annually
Electrical Components – When malfunctioning.

!! IMPORTANT !!

Prior to opening any of the machines outer panels, place both sides in the STOP / OFF mode and disconnect the machines power supply. Failure to do so can result in serious injury and or death.

A) Trouble Shooting Guide – Gravity Fed Freezers

Problem	Possible Cause	Suggested Solution
1) Product too soft	a) Drawing faster than the machine can produce	a) Slow down draw rate
	b) H.O.T. control set too low for product	b) Set H.O.T. Setting to a higher value
	c) Low on refrigerant	c) Contact Authorized Service Agent
2) No product dispenses from head	a) No mix in mix tank	a) Add Mix to mix tanks
	b) Gravity feed tube setting too small	b) Open the feed tube setting to a larger hole opening
	c) Beaters / augers assembled incorrectly	c) Disassemble the freezer and reassemble (refer to Part IV)
3) Low product overrun	a) Defective / leaking oring on feed tube	a) Replace all orings on feed tubes
	b) Gravity feed sleeve open too wide	b) Adjust the outer sleeve to a smaller opening
4) Machine will not start	a) No power to the machine	a) Check plug, disconnect, fuses or breaker for the machine
	b) Alarm #1 (RTA) on display monitor	b) Motor has drawn excessive amps, press Stop/Reset on touch pad.
	c) Control pad does not function	c) Contact a Coldelite Authorized Service Technician
	d) Alarm #9 (IMS) on display monitor	d) Assemble dispensing head on freezer or Contact Service Tech.
	e) Power to the freezer but no functions work	e) Contact a Coldelite Authorized Service Technician
5) Machine Runs Continuously	a) Restricted air flow (Air Cooled)	a) Clean air condenser or contact a Coldelite Authorized Service Tech.
	b) Low on refrigerant	b) Contact a Coldelite Authorized Service Technician
	c) H.O.T. setting too high for product used	c) Set the H.O.T. setting to a lower value
	d) Scraper blades worn out	d) Replace the beater scraper blades with new parts
	e) Not enough mix in cylinder to reach H.O.T.	e) Open feed tube and allow more mix in the cylinder
6) Machine will not Freeze product	a) Restricted air flow (Air Cooled)	a) Clean air condenser or contact a Coldelite Authorized Service Tech.
	b) Low on refrigerant	b) Contact a Coldelite Authorized Service Technician
	c) Compressor not functioning	c) Contact a Coldelite Authorized Service Technician
	d) Insufficient power supply (low voltage)	d) Contact a Coldelite Authorized Service Technician
	e) Insufficient water flow (water cooled)	e) Contact a Coldelite Authorized Service Technician

A.1) Trouble Shooting Guide – Pump Fed Freezers

Problem	Possible Cause	Suggested Solution
1) Product too soft	a) Drawing faster than the machine can produce	a) Slow down draw rate
	b) Suction tube setting too large for draw rate	b) Reset the suction tube to a smaller orifice setting (rotate CCW)
	c) H.O.T. control set too low for product	c) Set H.O.T. Setting to a higher value
	d) Low on refrigerant	d) Contact Authorized Service Agent
2) No product dispenses from head	a) No mix in mix tank	a) Add Mix to mix tanks
	b) Mix Pump assembled incorrectly	b) Disassemble and reassemble pump accordingly (refer to Part IV)
	c) Mix Pumps loosing prime	c) Change pump gears or Contact Authorized Service Agent
	d) Beaters / augers assembled incorrectly	d) Disassemble the freezer and reassemble (refer to Part IV)
	e) Pressure loss in mix feed system	e) Change all machine orings and seals
3) Low product overrun	a) Defective / leaking orings on mix feed system	a) Replace all orings on freezer
	b) Mix Pump suction tube setting too large	b) Adjust the suction tube (rotate tube lever ccw)
4) Machine will not start	a) No power to the machine	a) Check plug, disconnect, fuses or breaker for the machine
	b) Alarm #1 (RTA) on display monitor	b) Motor has drawn excessive amps, press Stop/Reset on touch pad.
	c) Control pad does not function	c) Contact a Coldelite Authorized Service Technician
	d) Alarm #9 (IMS) on display monitor	d) Assemble dispensing head on freezer or Contact Service Tech.
	e) Power to the freezer but no functions work	e) Contact a Coldelite Authorized Service Technician
5) Machine Runs Continuously	a) Restricted air flow (Air Cooled)	a) Clean air condenser or contact a Coldelite Authorized Service Tech.
	b) Low on refrigerant	b) Contact a Coldelite Authorized Service Technician
	c) H.O.T. setting too high for product used	c) Set the H.O.T. setting to a lower value
	d) Scraper blades worn out	d) Replace the beater scraper blades with new parts
	e) Not enough mix in cylinder to reach H.O.T.	e) Open suction tube (rotate cw) to allow more mix in the cylinder
6) Machine will not Freeze product	a) Restricted air flow (Air Cooled)	a) Clean air condenser or contact a Coldelite Authorized Service Tech.
	b) Low on refrigerant	b) Contact a Coldelite Authorized Service Technician
	c) Compressor not functioning	c) Contact a Coldelite Authorized Service Technician
	d) Insufficient power supply (low voltage)	d) Contact a Coldelite Authorized Service Technician
	e) Insufficient water flow (water cooled)	e) Contact a Coldelite Authorized Service Technician

B) Machine Safety Alarms

This freezer is equipped with built in, self monitoring (Safety) devices, which will interrupt operation of the freezer if activated. When activated, the little red LED light at the bottom right corner of the display monitor will illuminate and flash. (refer to Figure 12)

This LED will flash when the alarm has been activated. It will stop flashing, but remain lit when the machine has reset and resumed operation. To deactivate the LED, press the Stop / Reset button on the touch pad. An alarm code will display (AL1 through AL9), press the Stop / Reset button again and the LED light should go out.

ALARM CODES

Alarm #	Description	Call Technician
AL1 (rta)	Motor overload tripped	No- Press Stop / Reset Yes if not resetting in 10 minutes
AL2 (te2)	Secondary cylinder probe	Yes if not resetting
AL3 (te1)	TE1 Probe out of order	Yes if not resetting
AL5 (tev)	Mix tank probe out	Yes if not resetting
AL6 (tec)	Cylinder probe out	Yes if not resetting
AL7 (tgv)	Tank display probe out	Yes if not resetting
AL8 (Ice)	Cylinder too cold	No- Allow more mix to enter the cylinders
AL9 (Ims)	Dispensing head switch	No- Install dispensing head or Yes if not resetting

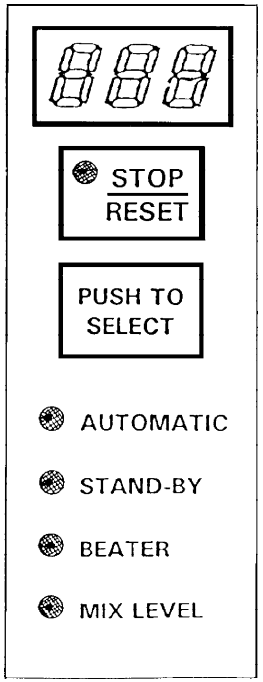


Figure 12